



Utah Water Assessment & Conditions Monitoring (Drought Webinar)

The meeting will begin shortly



Thank you to our contributors

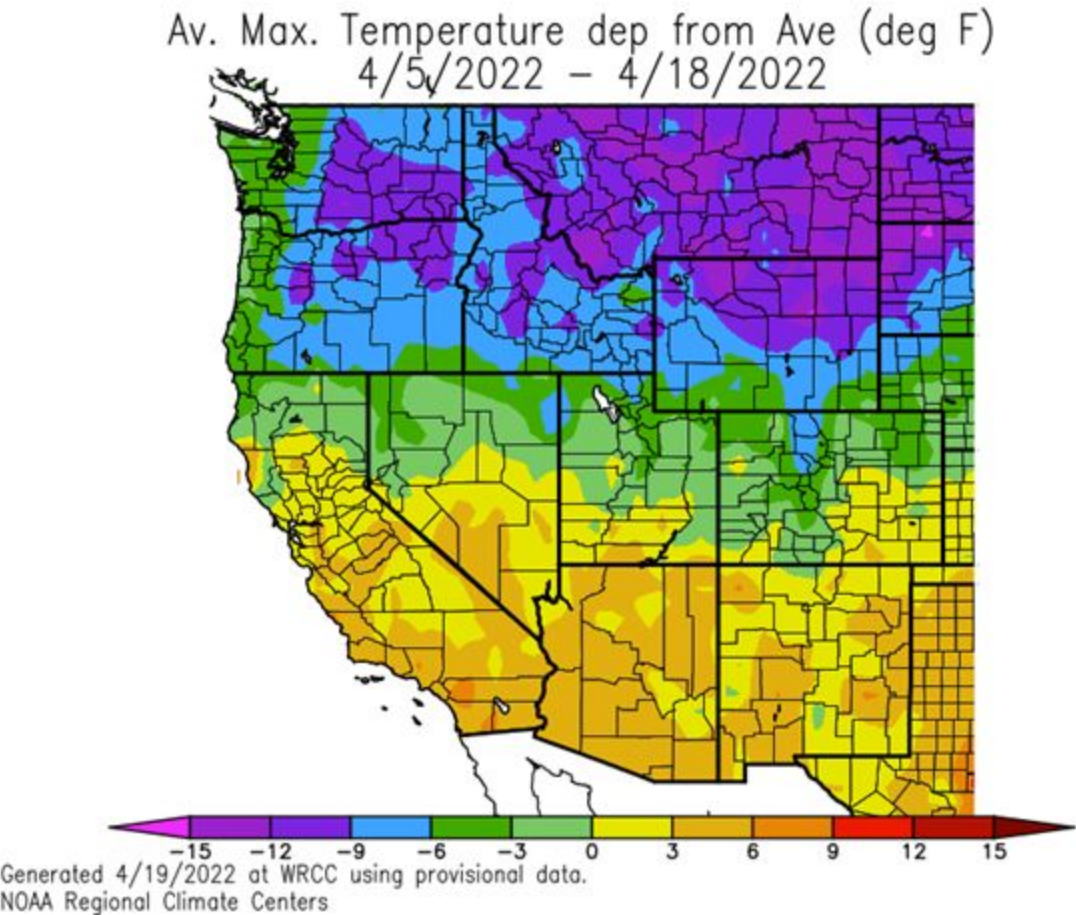
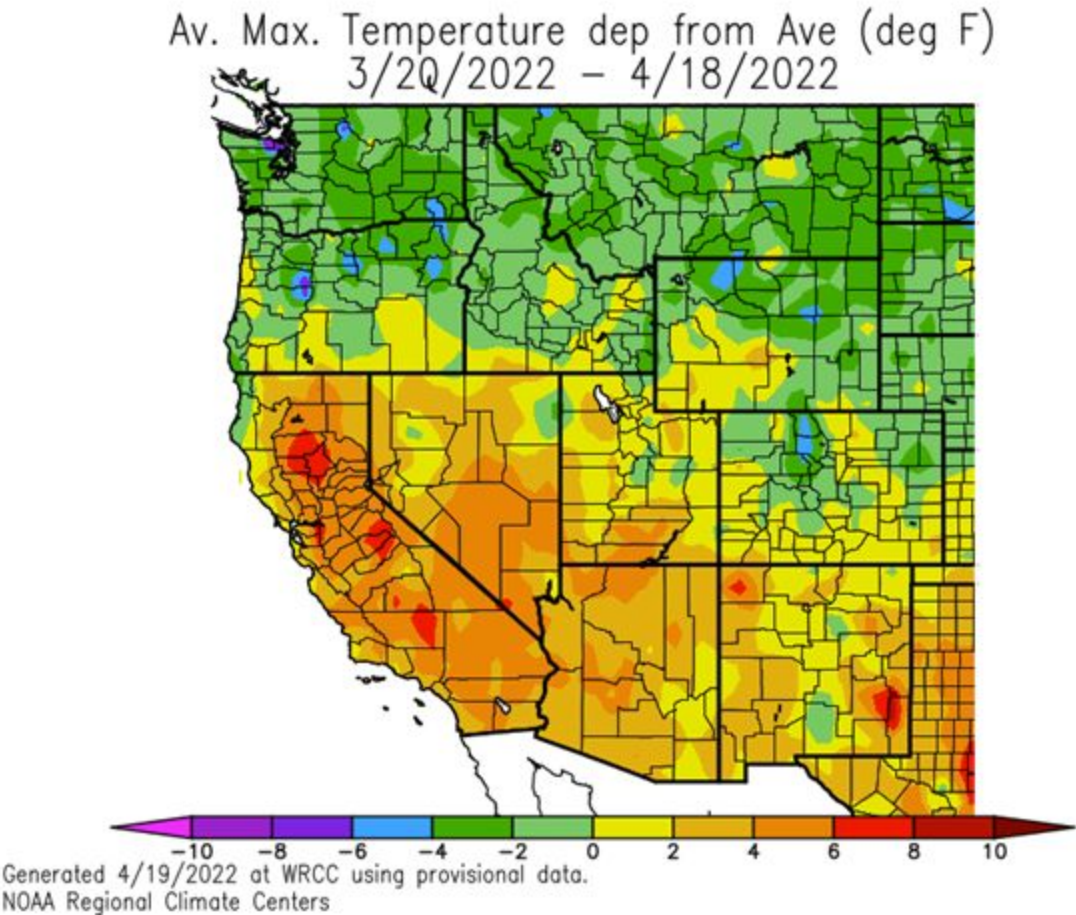




Utah Water Assessment & Conditions Monitoring Webinar

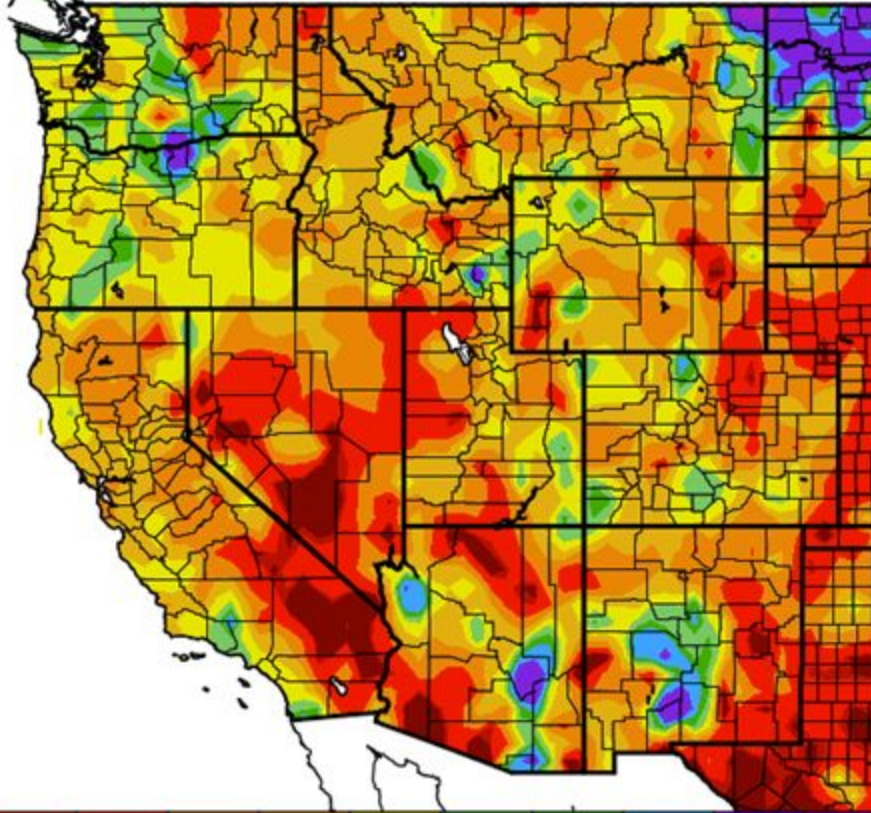
April 19, 2022

Max Temperature departure from average (1-month & 2-week)



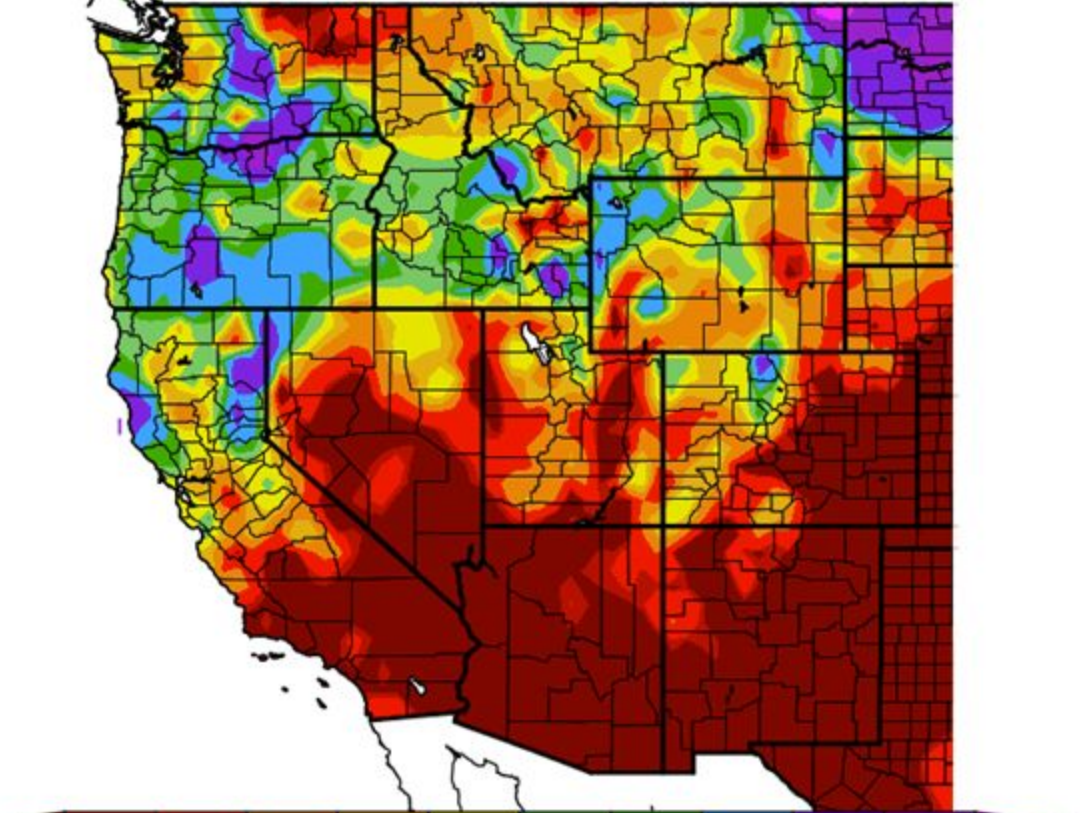
Precipitation % of average (1-month & 2-week)

Percent of Average Precipitation (%)
3/20/2022 – 4/18/2022



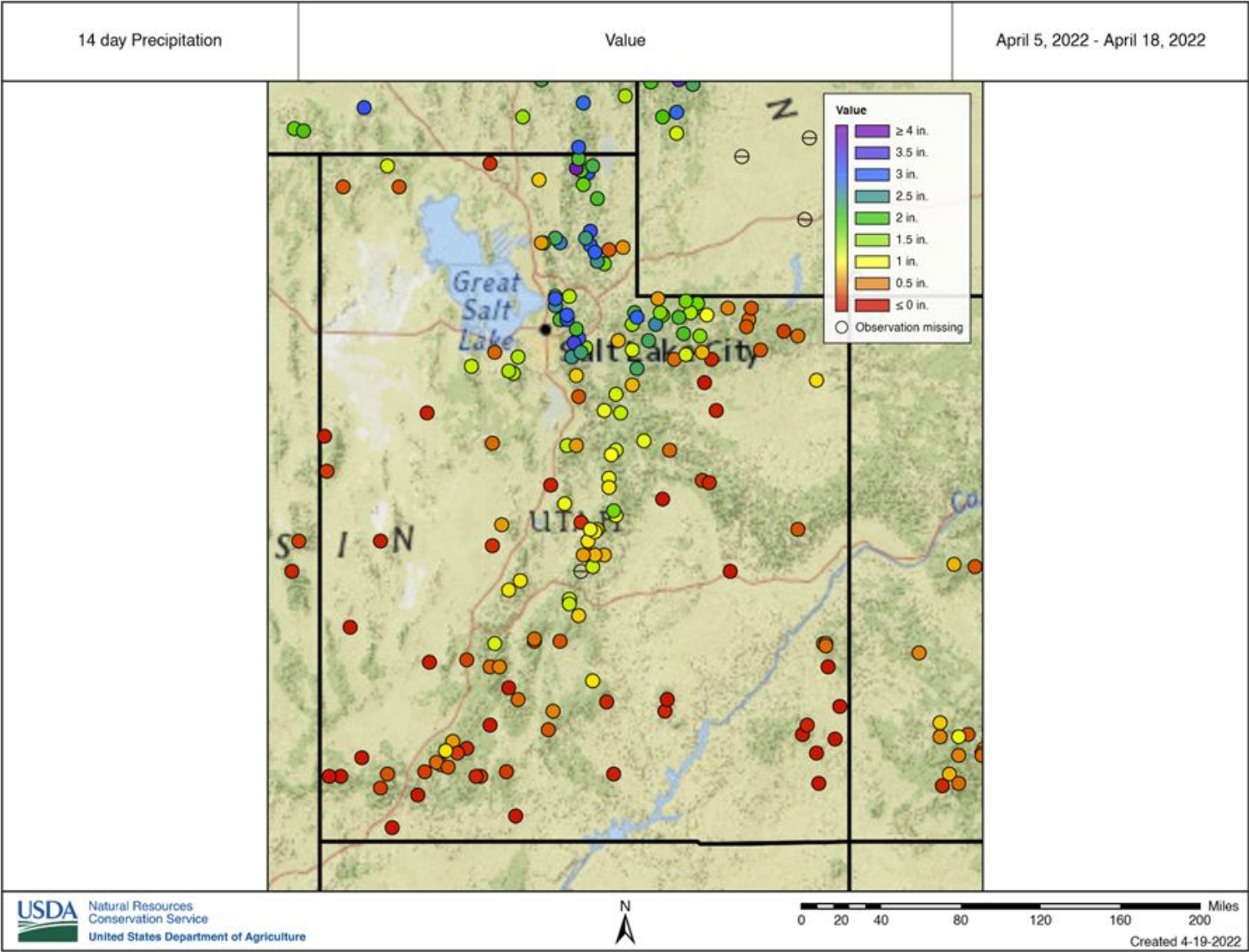
Generated 4/19/2022 at WRCC using provisional data.
NOAA Regional Climate Centers

Percent of Average Precipitation (%)
4/5/2022 – 4/18/2022



19/2022 at WRCC using provisional data.
Climate Centers

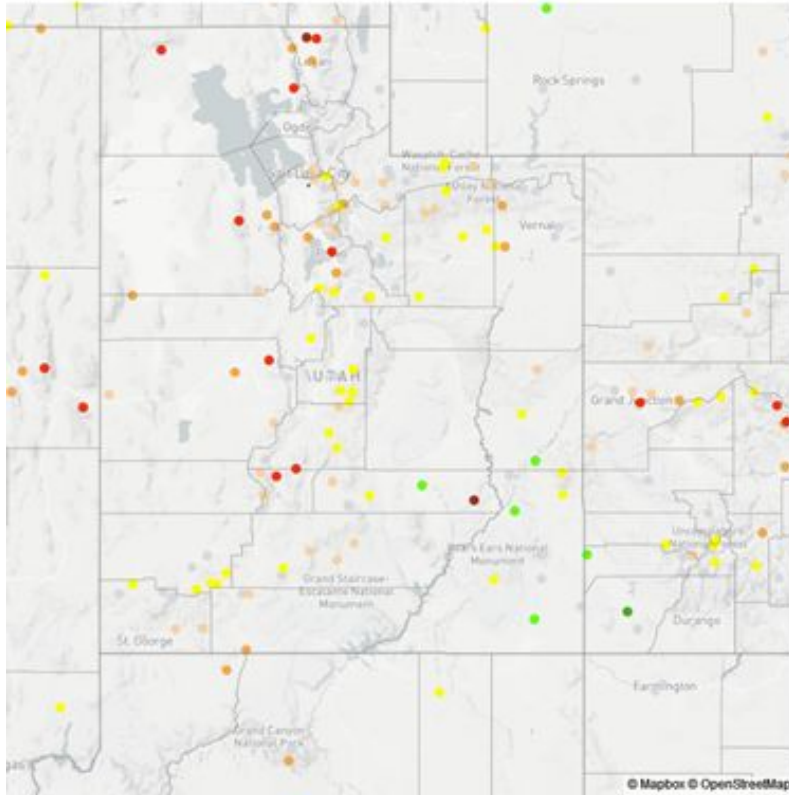
SNOTEL/SCAN 2-week Precipitation



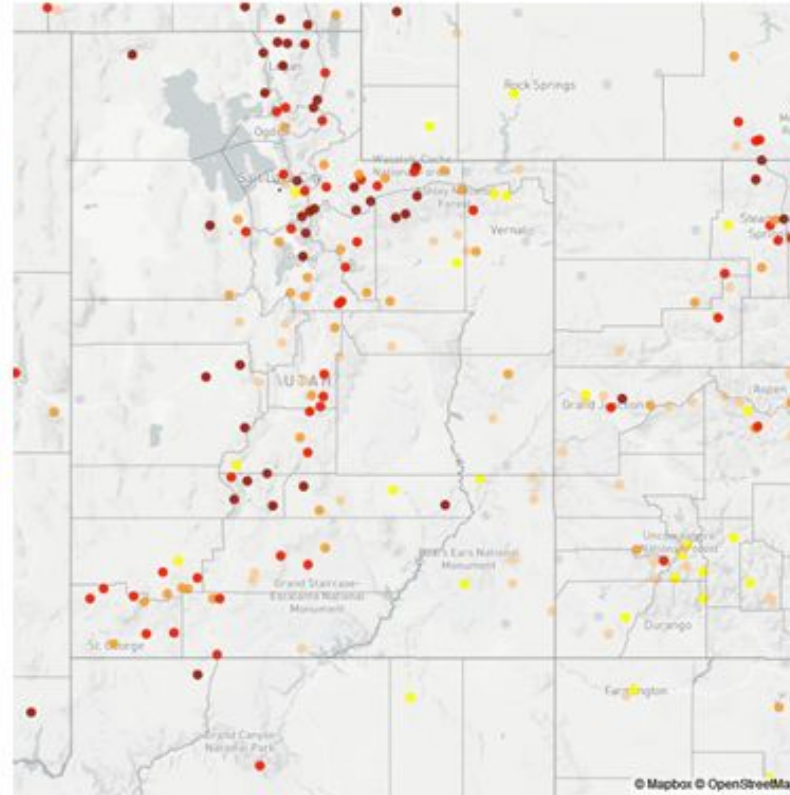
Agency - Utah Climate Center
Presenter - Jon Meyer

30-day, 90-day, 6-month Standardized Precipitation Index (SPI)

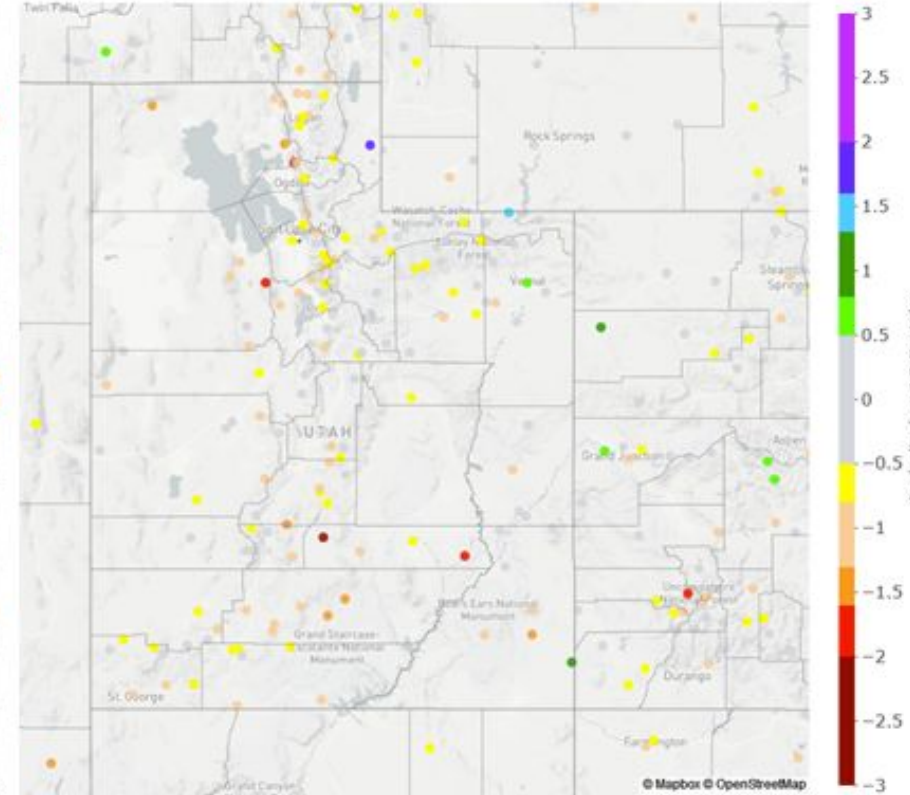
30-day Standardized Precipitation Index: 2022/03/19 - 2022/04/17



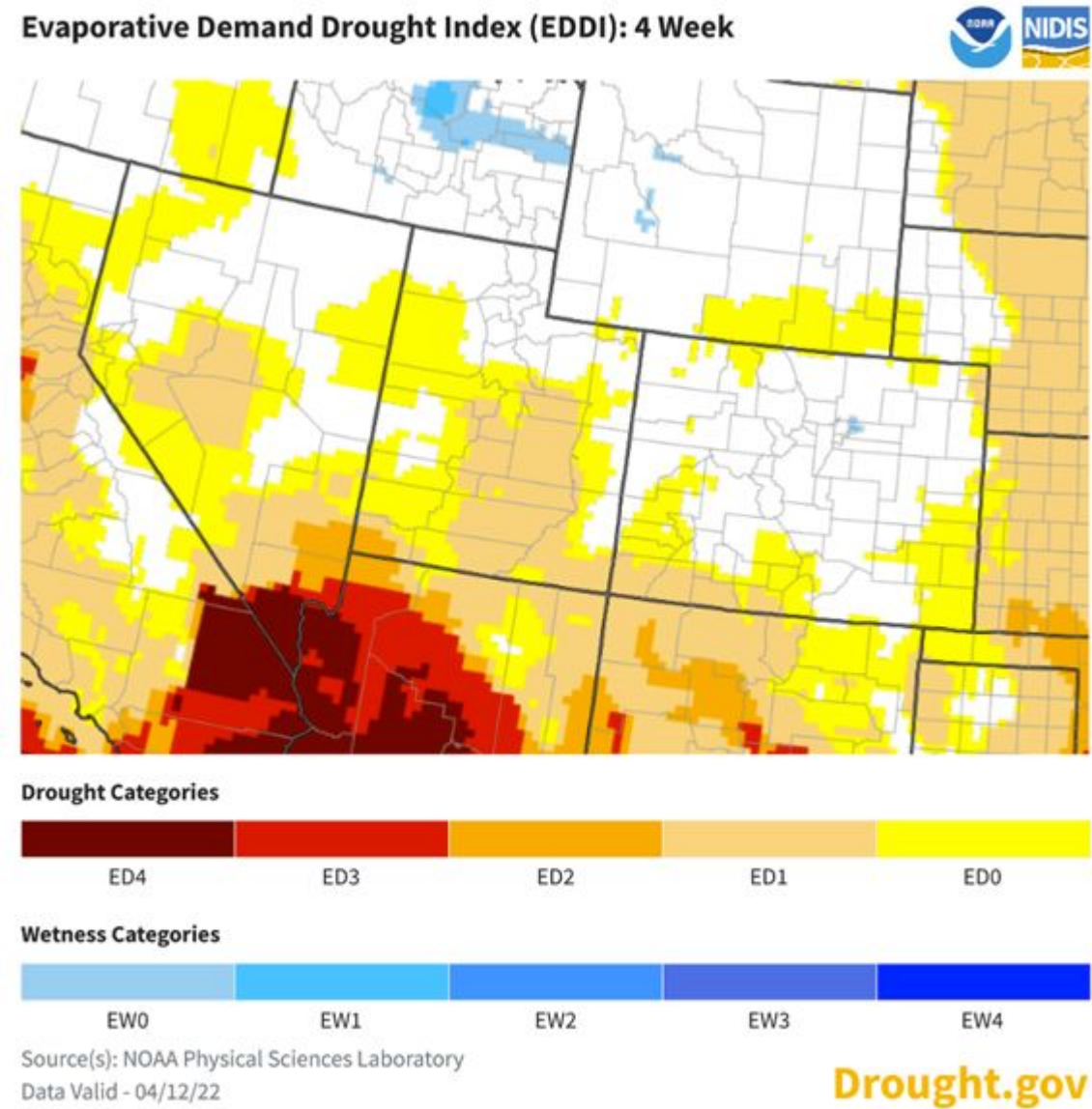
90-day Standardized Precipitation Index: 2022/01/18 - 2022/04/17



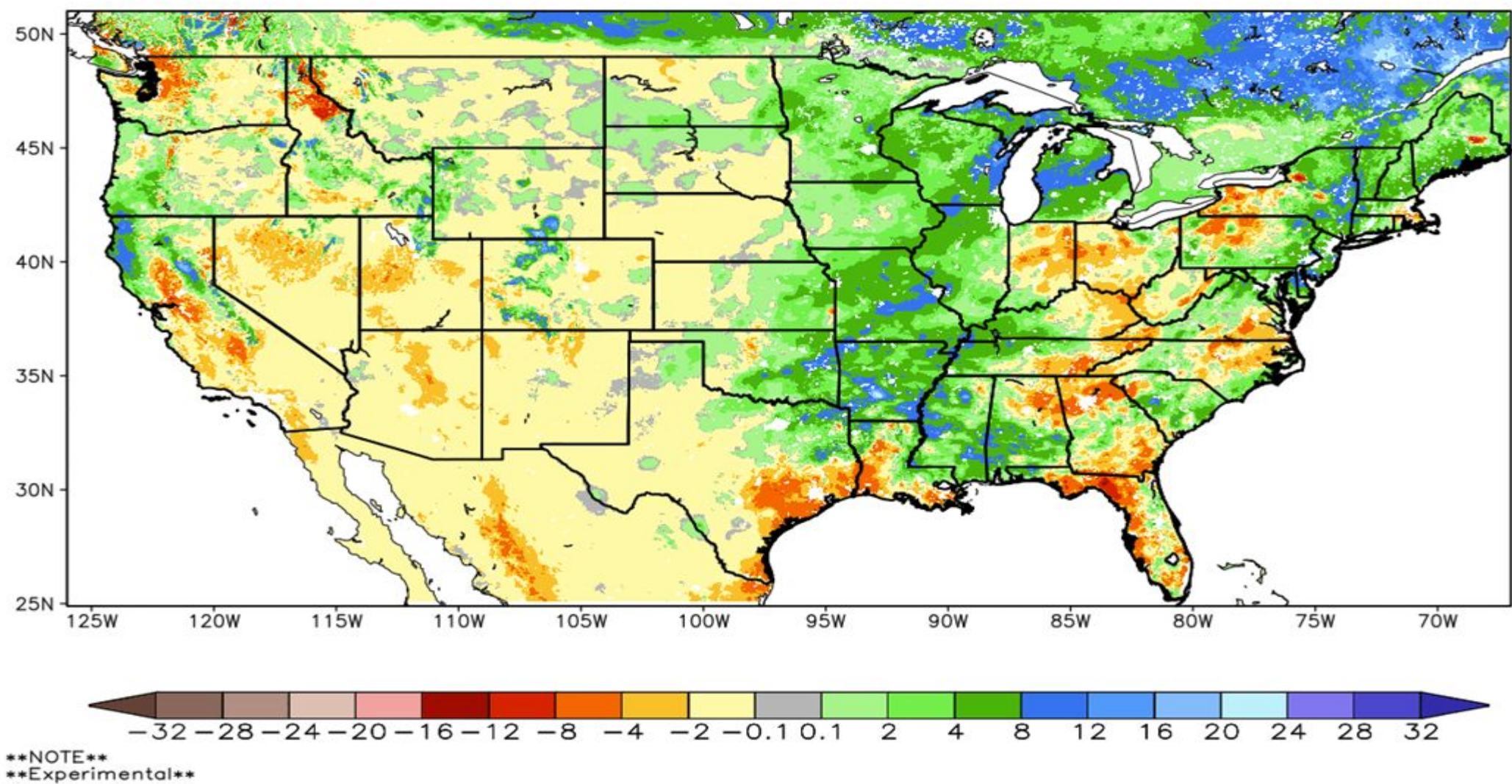
6-month Standardized Precipitation Index: 2021/10/18 - 2022/04/17



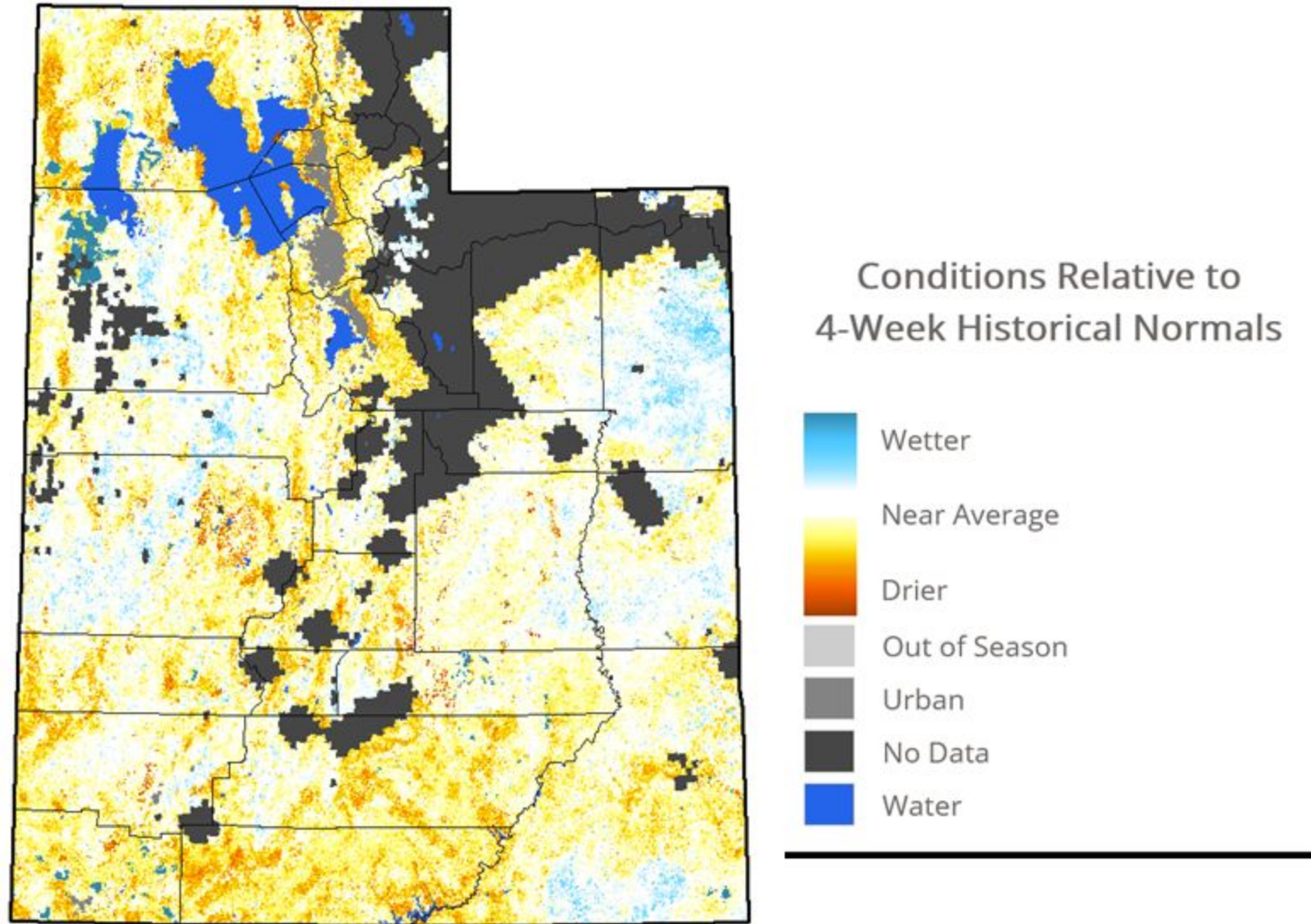
Evaporative Demand Drought Index (EDDI)



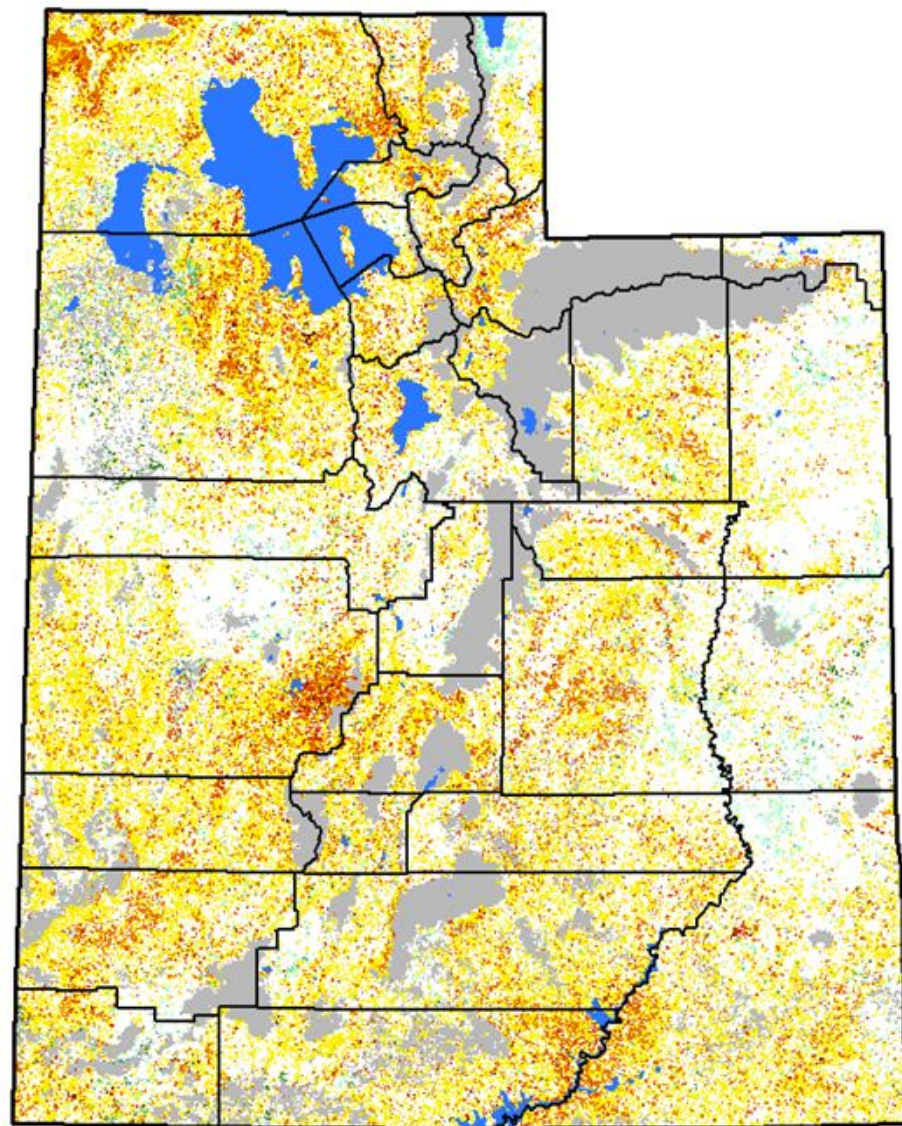
1-month difference in column relative soil moisture (%)



Quick-DRI Index



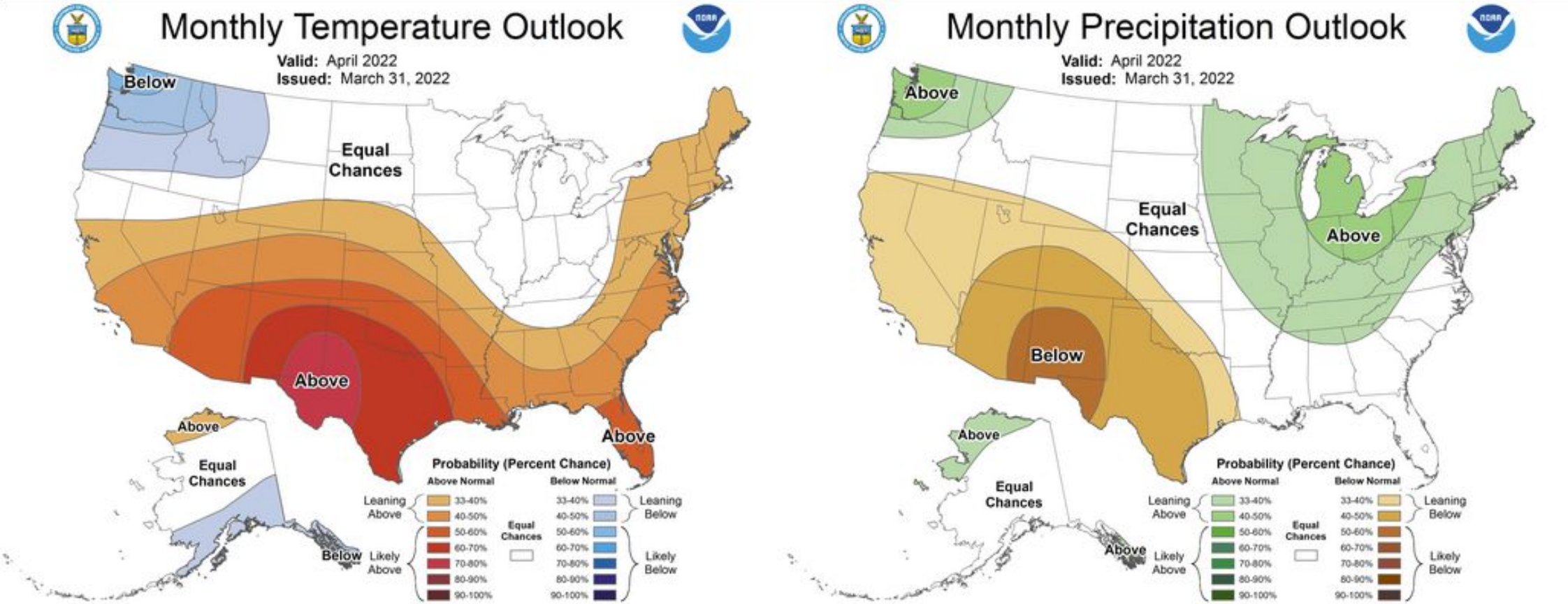
Vegetation Drought Response Index (Veg-DRI)



Vegetation Condition

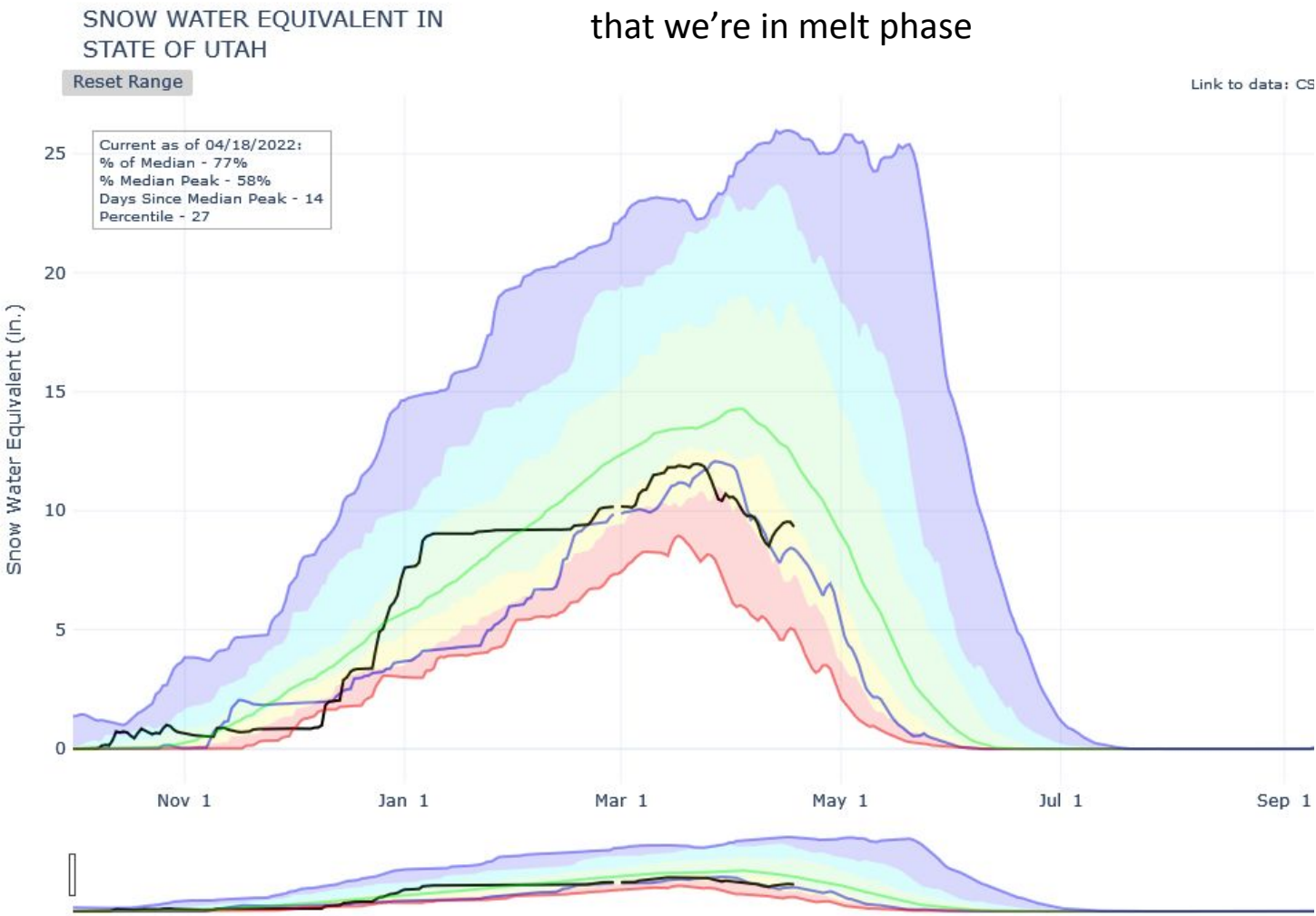
- Extreme Drought
- Severe Drought
- Moderate Drought
- Pre-drought stress
- Near Normal
- Unusually Moist
- Very Moist
- Extremely Moist
- Out of Season
- Water
- Other Landcover

CPC April Outlooks (yet to be updated for May)

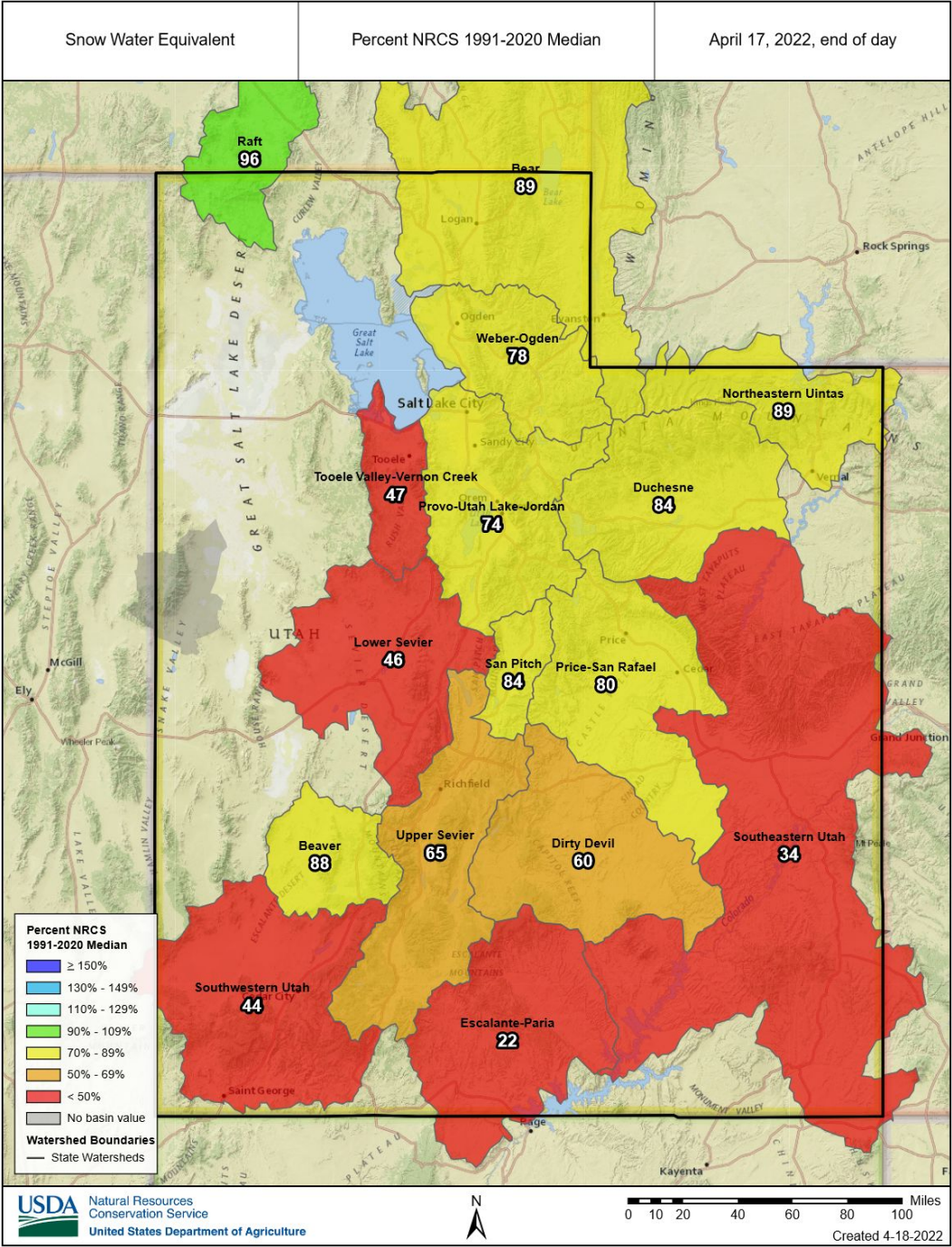


Snowpack

- 77% of normal SWE (statewide)
- Central & Northern Utah faring better than rest of state
- % normal values less meaningful now that we're in melt phase

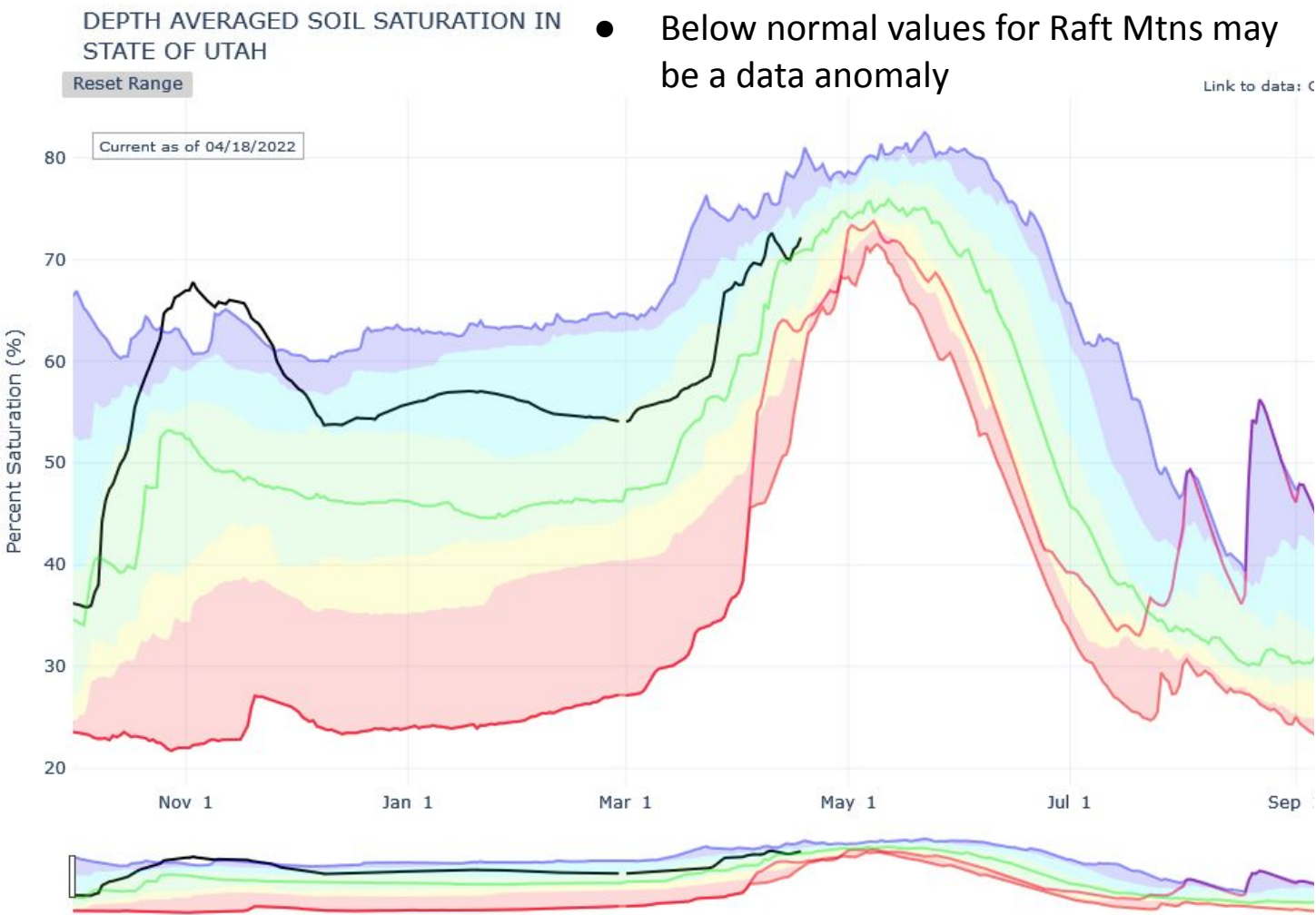


Agency - NRCS Snow Survey
Presenter - Kent Sutcliffe

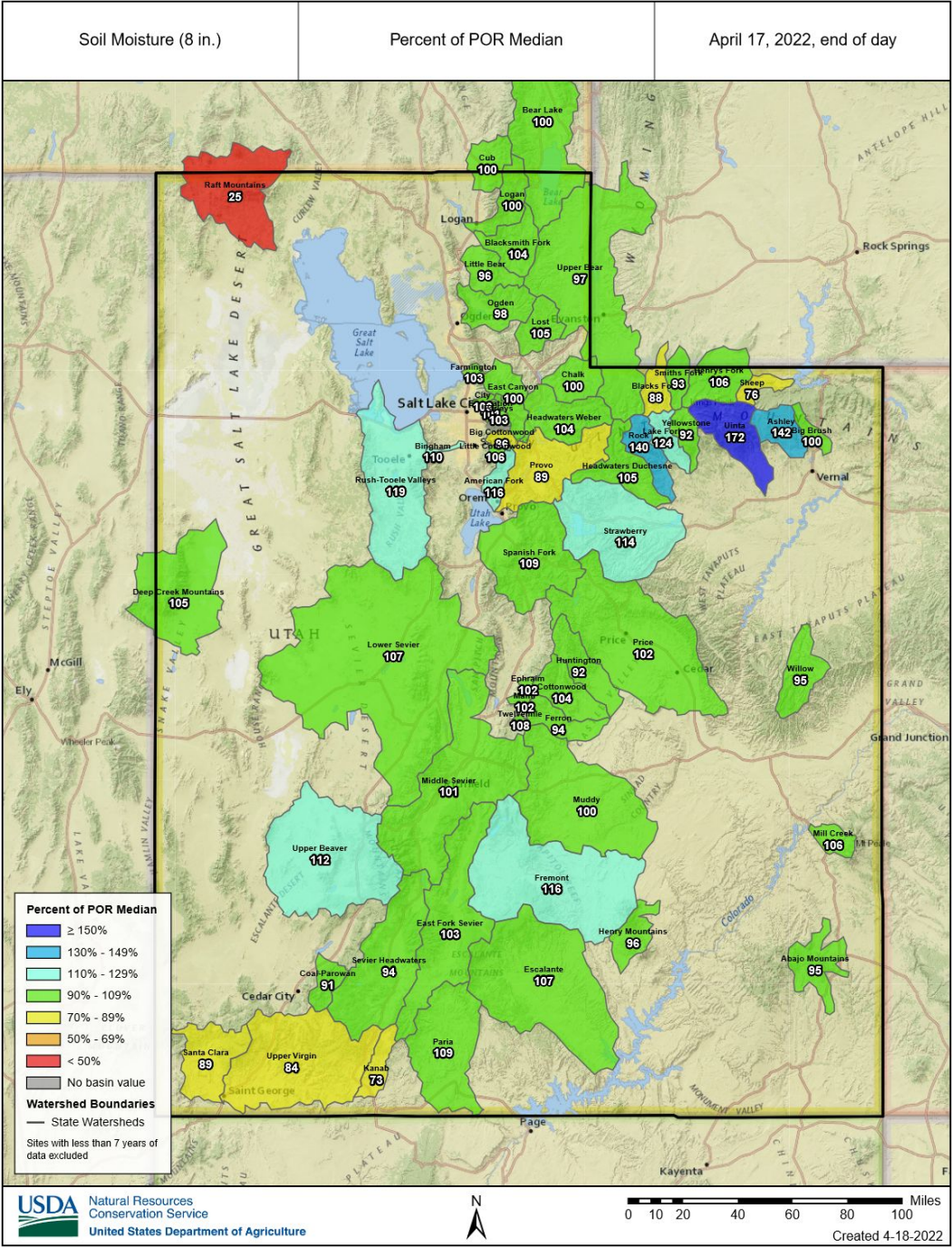


Soil Moisture

- Statewide soil moisture % saturation is slightly above normal, well above last year's historically dry soils
- Recent upticks relate to early melt
- Below normal values for Raft Mtns may be a data anomaly



Agency - NRCS Snow Survey
Presenter - Kent Sutcliffe



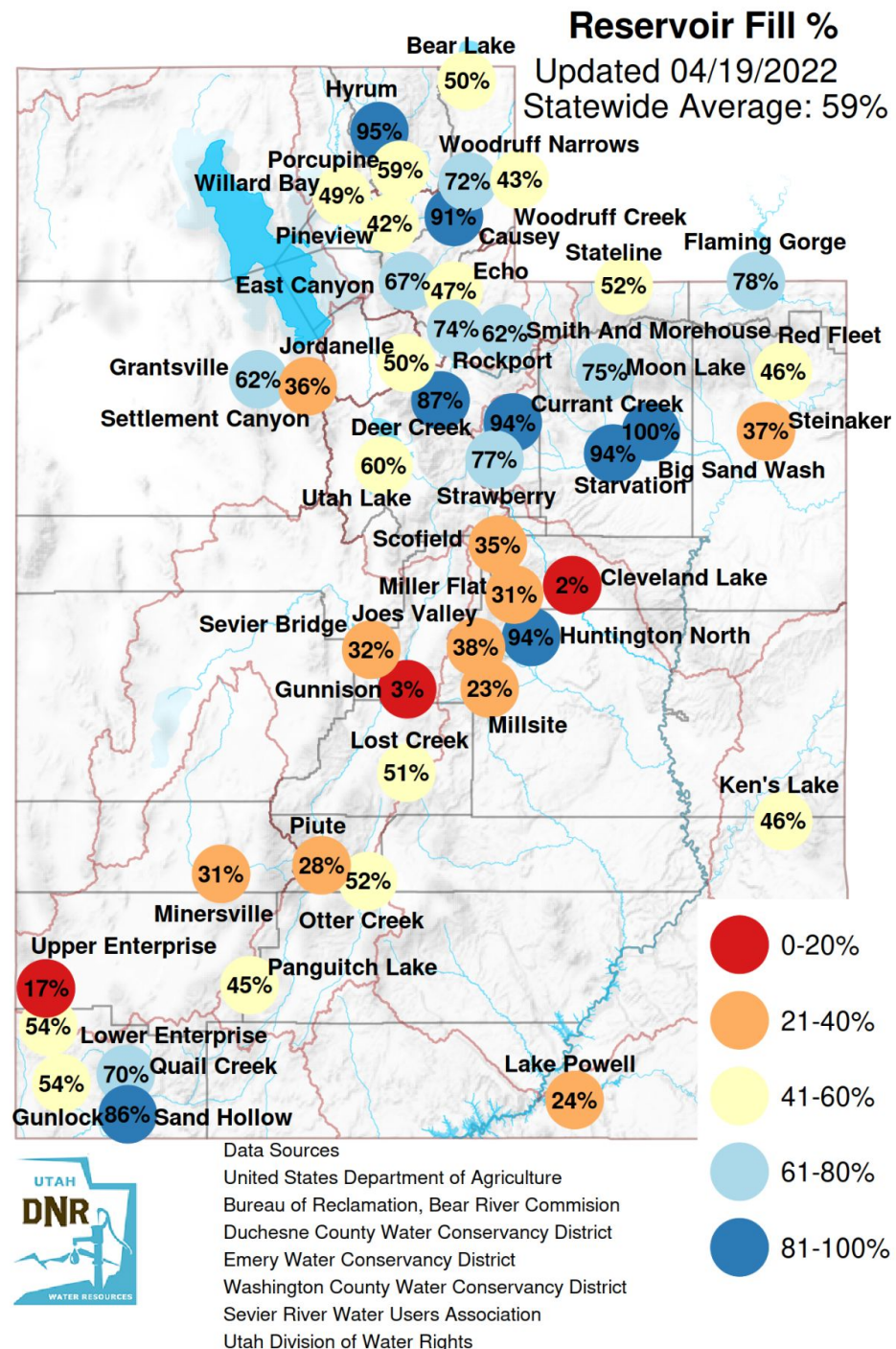
New Reservoir App is live on

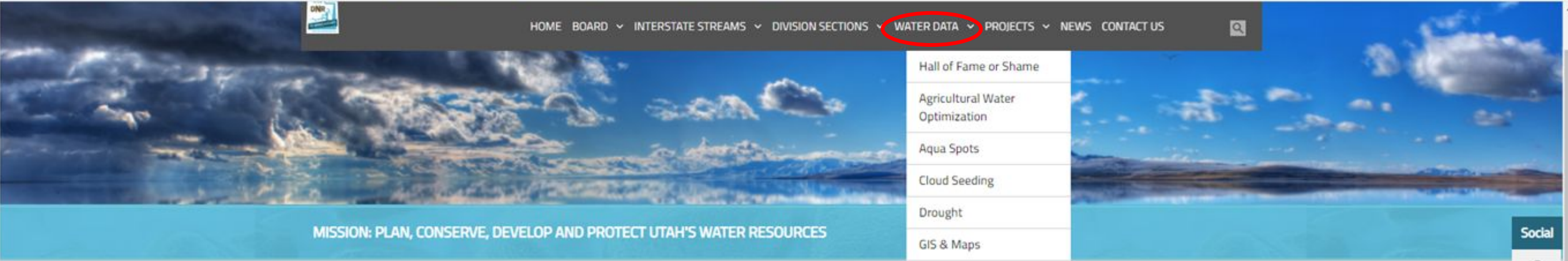
<https://water.utah.gov/>

Anyone can download or
navigate this map

Thank you to the many
agencies that collect
reservoir data

Agency - Division of Water Resources
Presenter - Laura Haskell





MISSION: PLAN, CONSERVE, DEVELOP AND PROTECT UTAH'S WATER RESOURCES

- HOME
- BOARD
- INTERSTATE STREAMS
- DIVISION SECTIONS
- WATER DATA**
- PROJECTS
- NEWS
- CONTACT US

- Hall of Fame or Shame
- Agricultural Water Optimization
- Aqua Spots
- Cloud Seeding
- Drought
- GIS & Maps
- Open Water Data Site



Utah Division of Water Resources
The Utah Division of Water Resources is part of the Department of Natural Resources. We are responsible for developing and protecting Utah's water resources to be Utah's water future.

Reservoir Levels

Utah is a semi-arid state with significant challenges facing us in finding sufficient water, that agriculture and the environment can prosper.

- Precipitation Graphs
 - Regional Conservation Goals
 - Water Reports
 - Water Use Reporting
- There are seven divisions housed within the Division of Water Resources. Planning, Conserving, and Developing, the Division earnestly strives to ensure that Utah's water resources are protected and that the future of Utah is secure.
- One of the most significant challenges facing us is the Division recognize the importance of water. Utah families have reliable access to water, that agriculture and the environment can prosper.

It is our belief that we will meet the future water needs through a combination of multi-faceted solutions that include conservation, efficiency, optimization, agriculture conversion and water development. Such an approach will help us prepare, plan and sustain Utah's water future.

Water Resources encourages all Utahns and sectors to do their part to conserve Utah's most precious resource, water, by embracing a water-wise ethic to safeguard the future of Utah.

Social

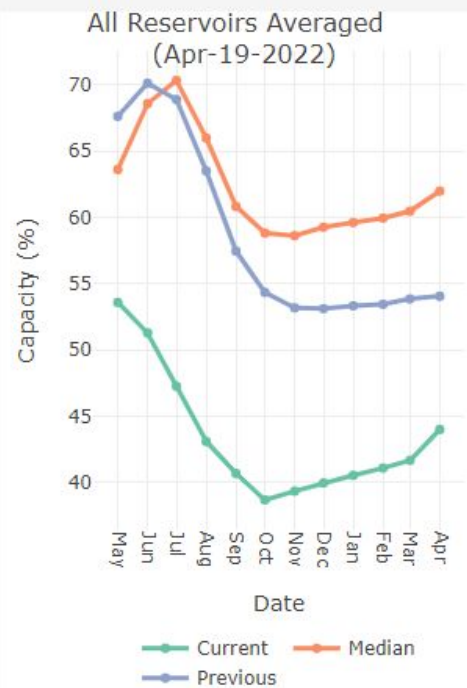
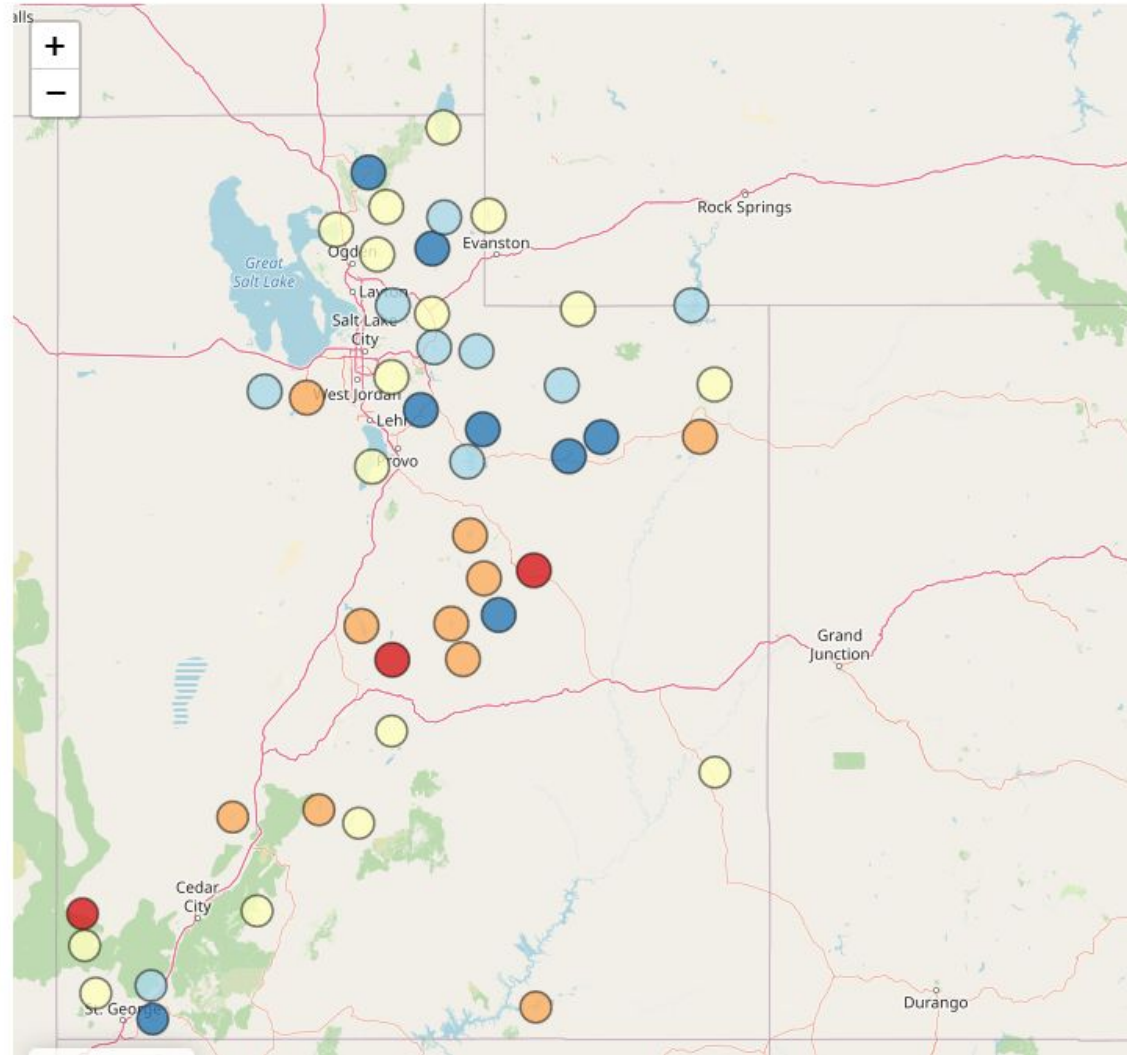
- f
- YouTube
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RESERVOIR LEVELS

[Utah Reservoir Conditions](#)
[Interactive map](#)
[Stats](#)
[More Info](#)

Reservoir Conditions

Reservoir Selection:


[Download Plot](#)
[Download Map](#)


Social



RESERVOIR LEVELS

Utah Reservoir Conditions

Interactive map

Stats

More Info

Basin Selection:

Statewide

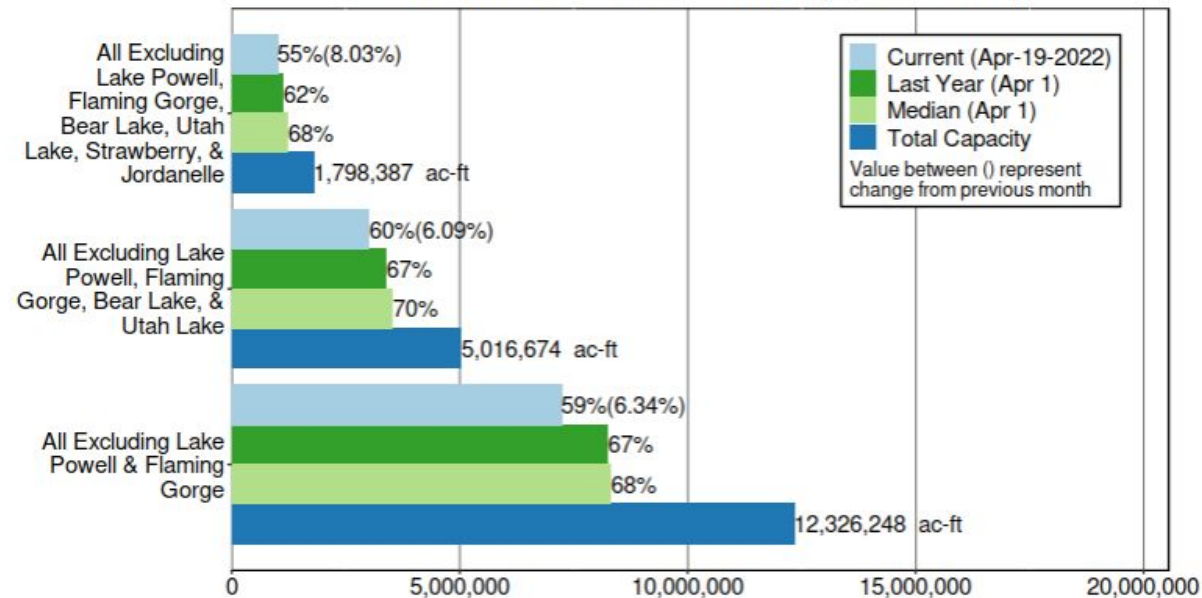
Download Plot

Raw Data

Total Reservoir Capacity 44%

Deviation from Median -17.99%

Statewide Reservoir Storage (Apr-19-2022)

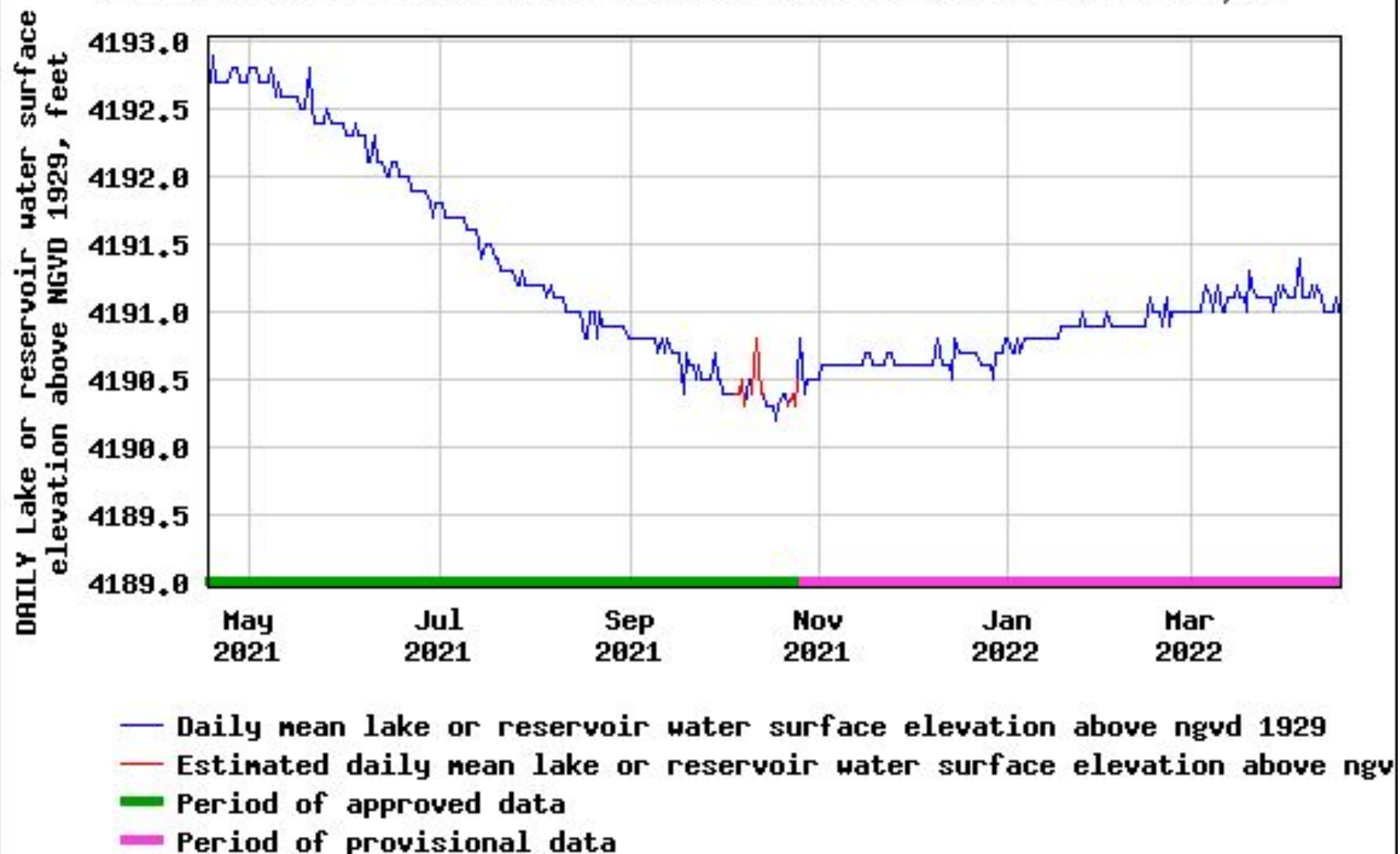


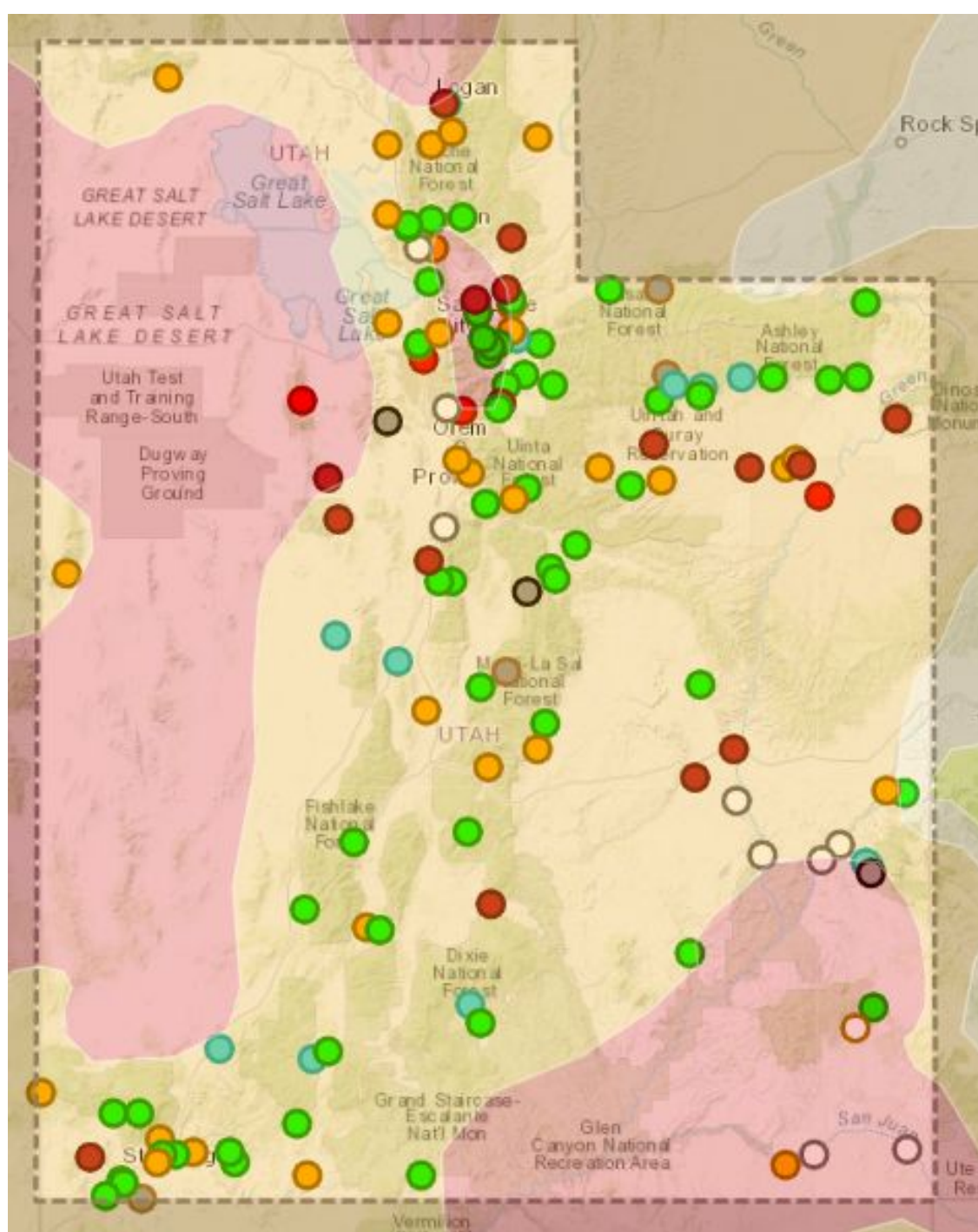
Social





USGS 10010000 GREAT SALT LAKE AT SALTAIR BOAT HARBOR, UT

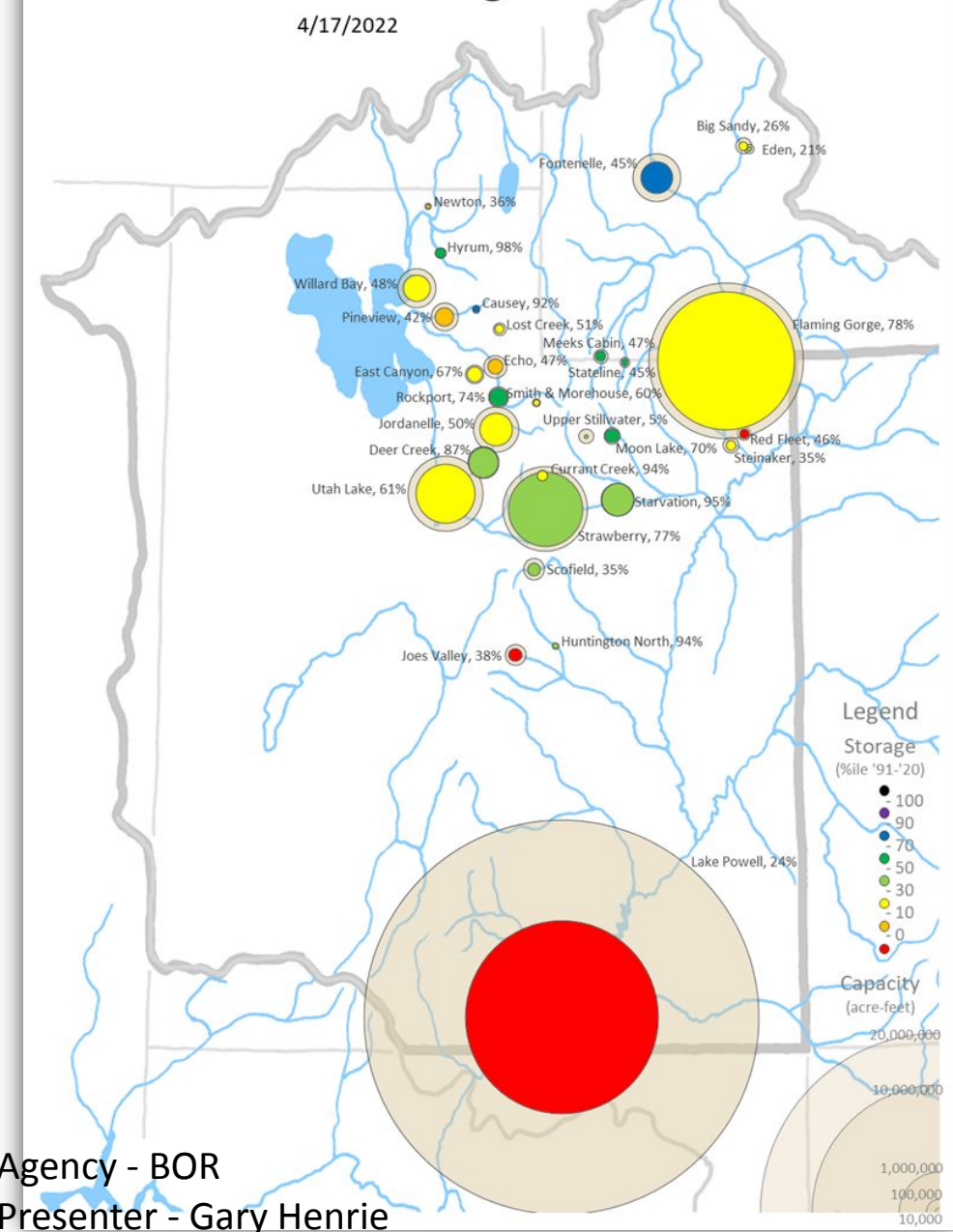




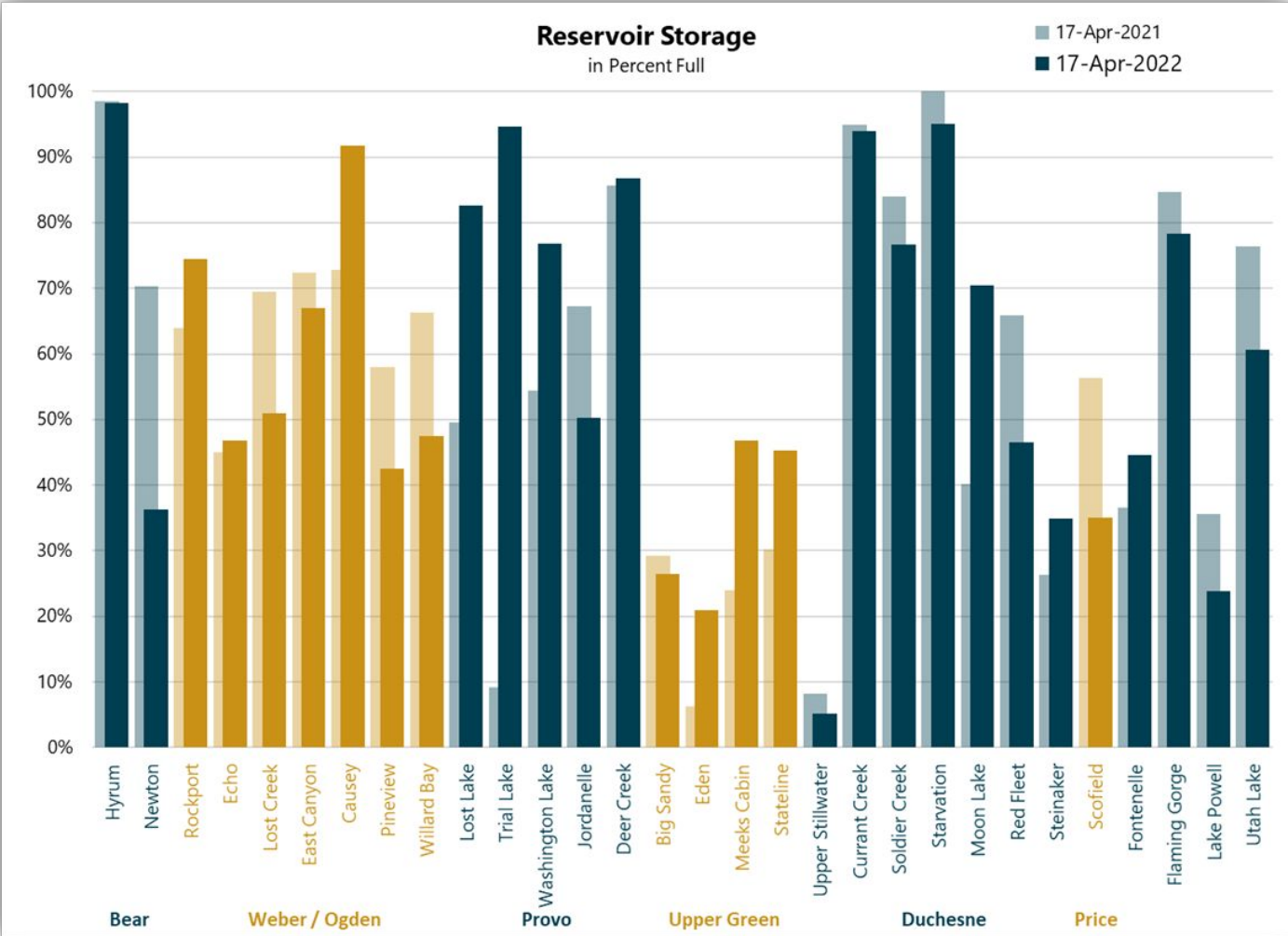
Streamflow: Status

- Above flood stage
- All-time high for this day 100th percentile (maximum)
- Much above normal >90th percentile
- Above normal 76th – 90th percentile
- Normal 25th – 75th percentile
- Below normal 10th – 24th percentile
- Much below normal <10th percentile
- All-time low for this day 0th percentile (minimum)
- Not flowing
- Not ranked
- Measurement flag
- Recent measurement unavailable

Reservoir Levels



Agency - BOR
Presenter - Gary Henrie



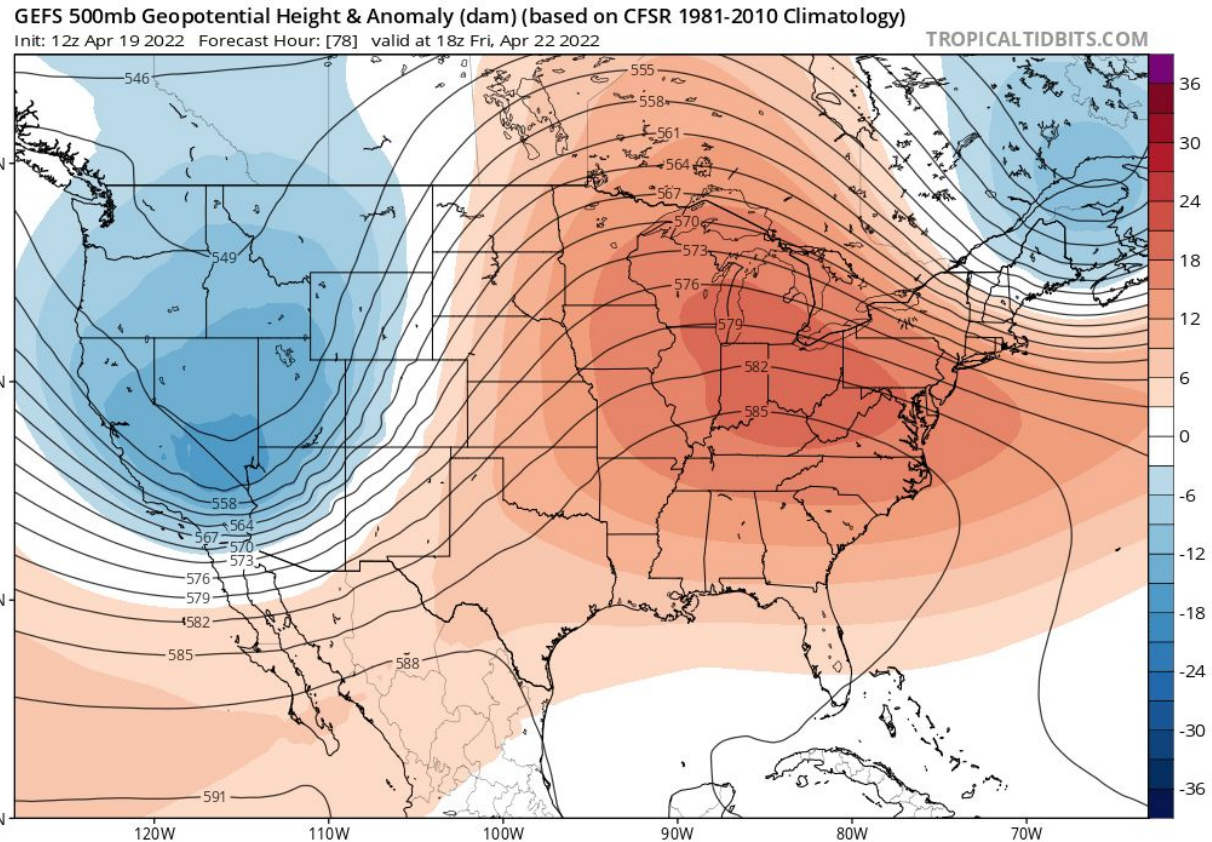
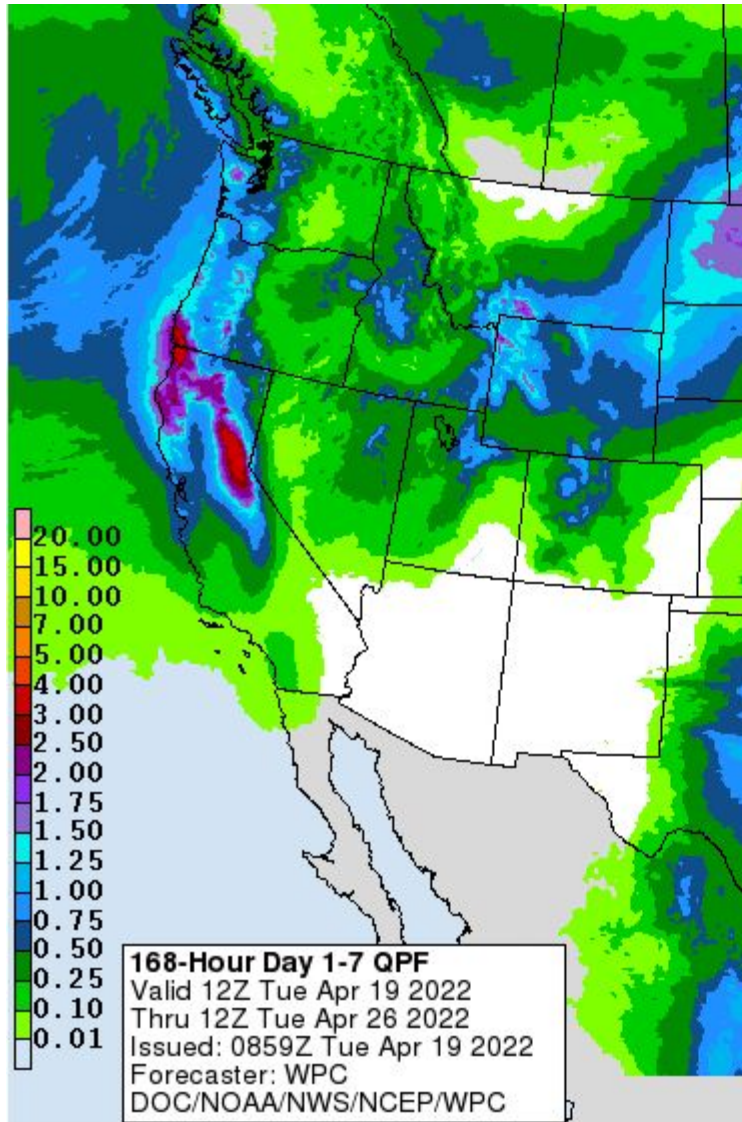
Overall storage:
(Excluding Fontenelle, Flaming Gorge, and Lake Powell)
Current: 61% 64%
Last year: 72% 74%

March 1 April 17

Reservoir change:
Pineview: -25% -16%
Willard Bay: -25% -19%
Jordanelle: -18% -17%
Strawberry: -8% -7%
Starvation: -7% -6%
Scofield: -23% -21%
Lake Powell: -13% -12%
Utah Lake: -16% -16%



Weather Forecast Office Utah Day 1-7 Outlook

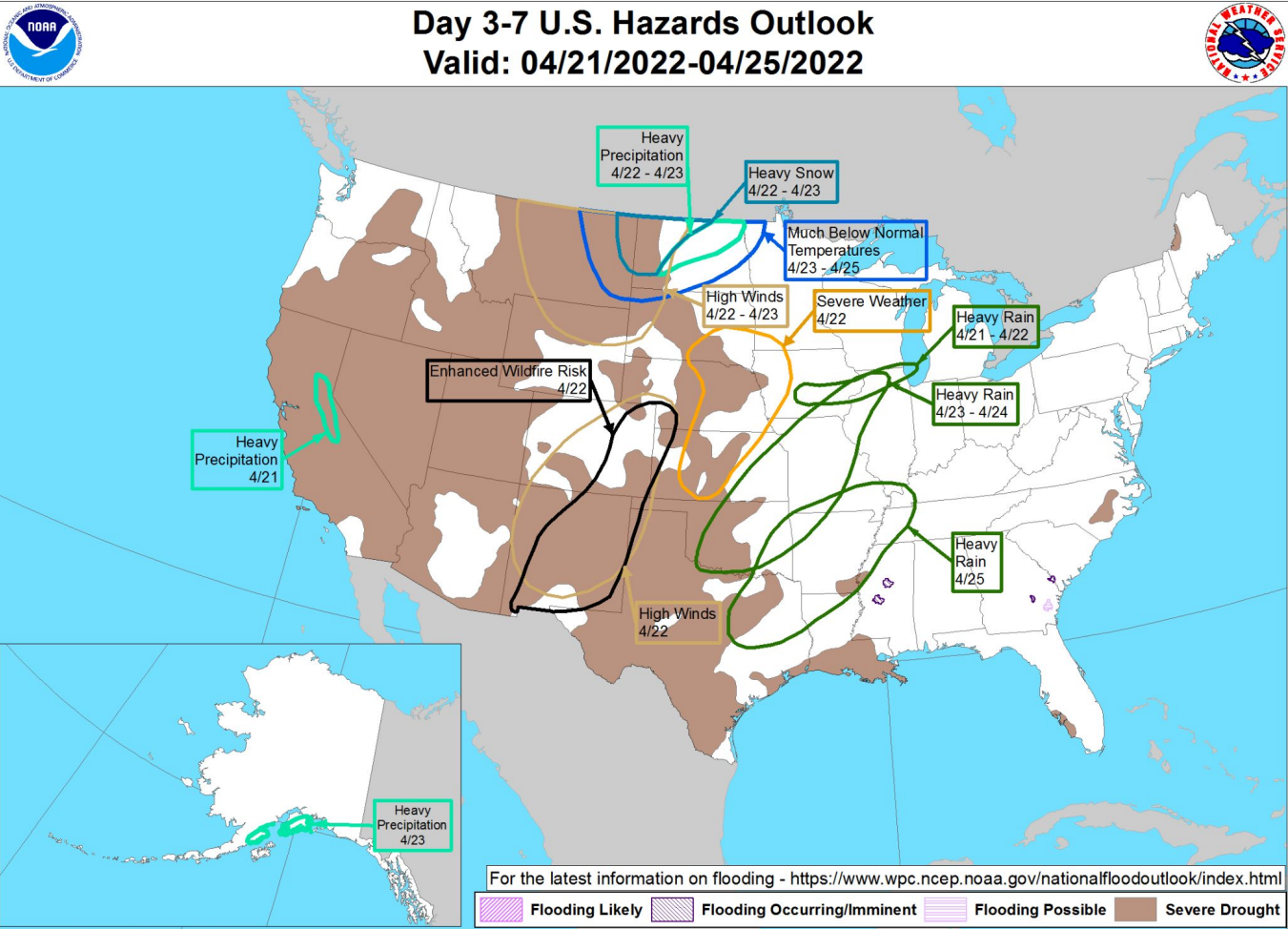
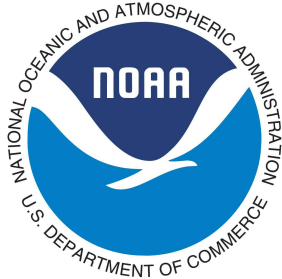


- Pleasant conditions return Wed-Thu, with slightly above normal temperatures.
- Bulk of precipitation will occur on Friday through Saturday
 - Modest mountain snow and valley rain.
- High pressure and dry conditions return by Tuesday of next week. Strength of the high pressure remains uncertain at this time.

Agency - National Weather Service Weather Forecast Office

Presenter - Paul Miller

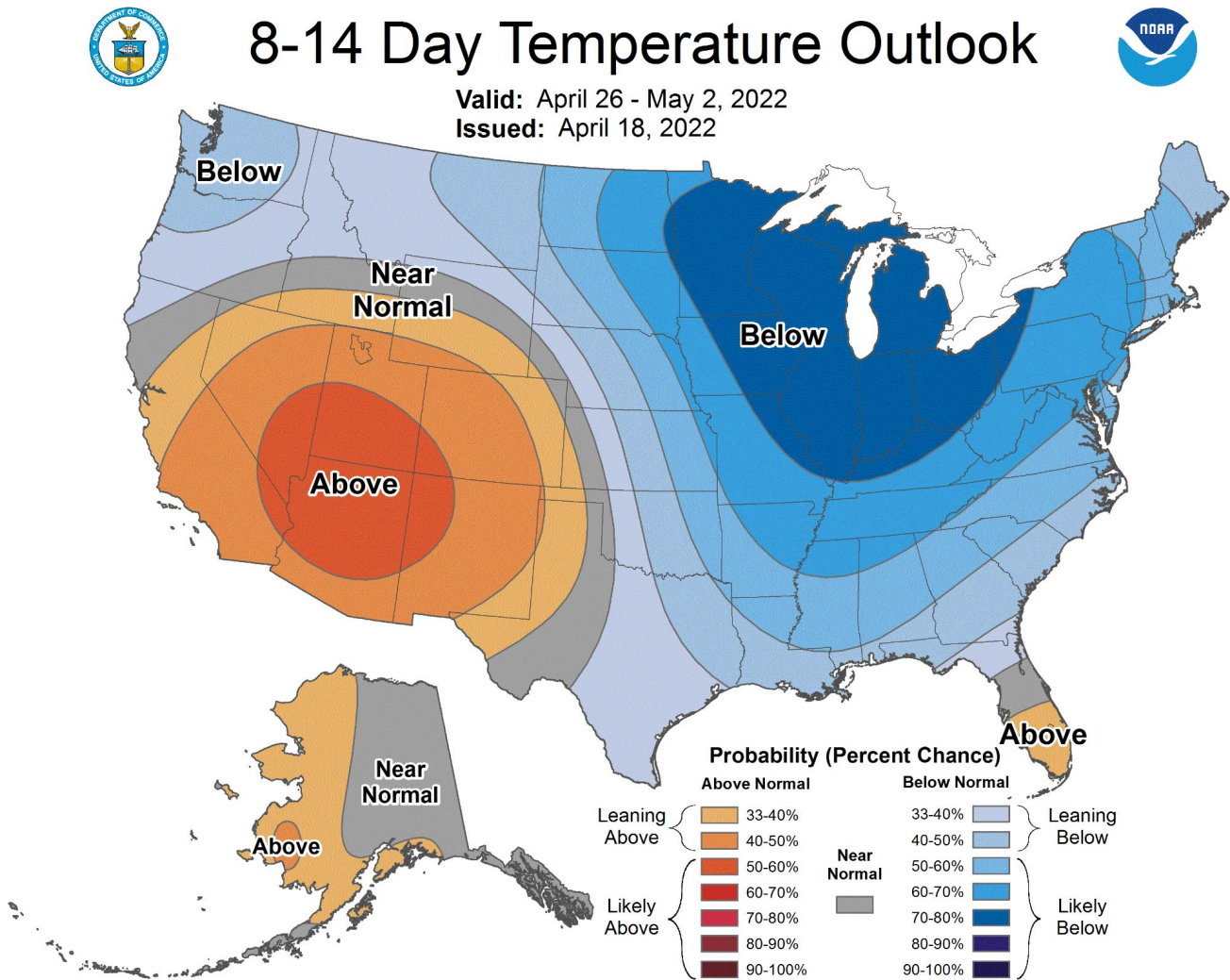
Weather Prediction Center U.S. Day 3-7 Hazards Outlook



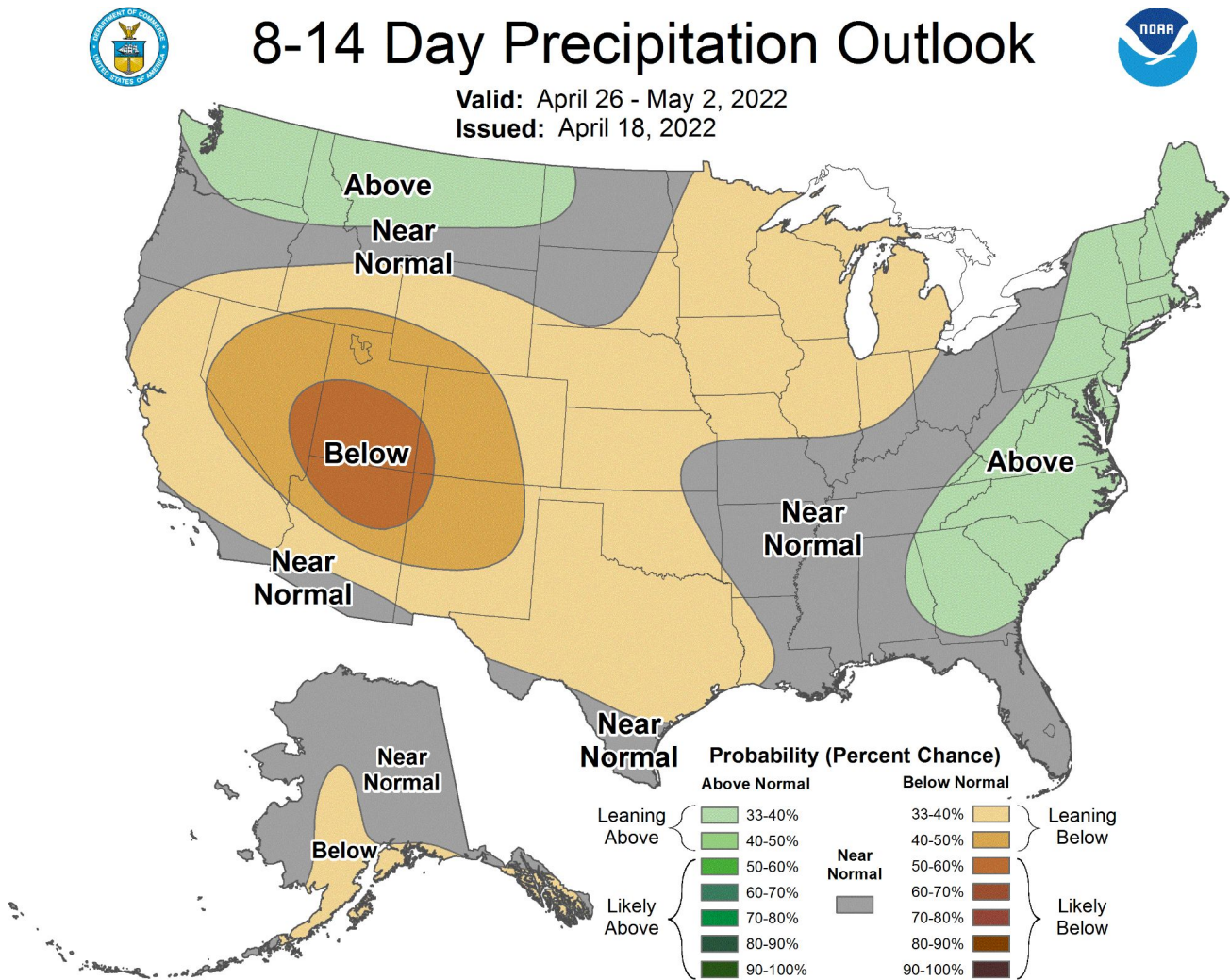
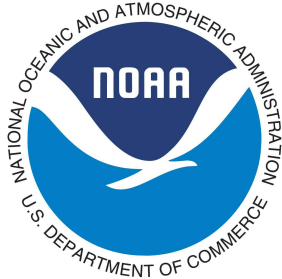
Weather Prediction Center
Made: 04/18/2022 3PM EDT

Follow us: www.wpc.ncep.noaa.gov

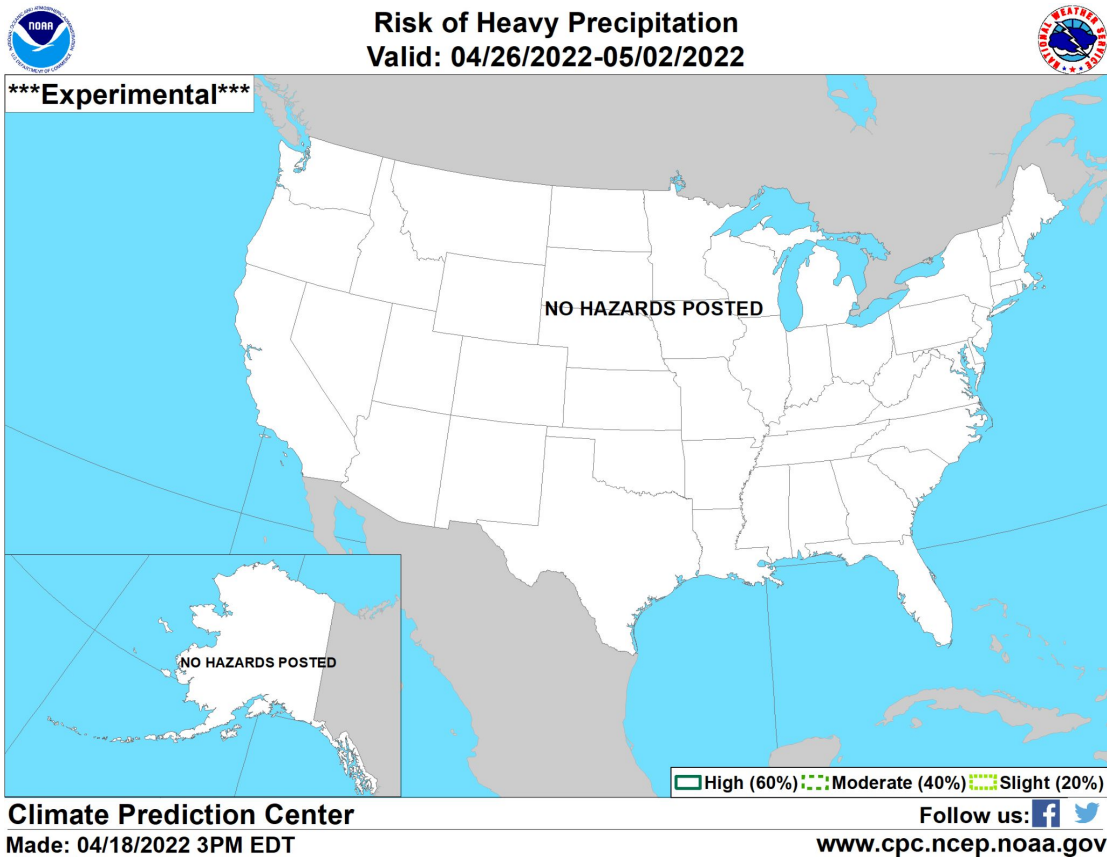
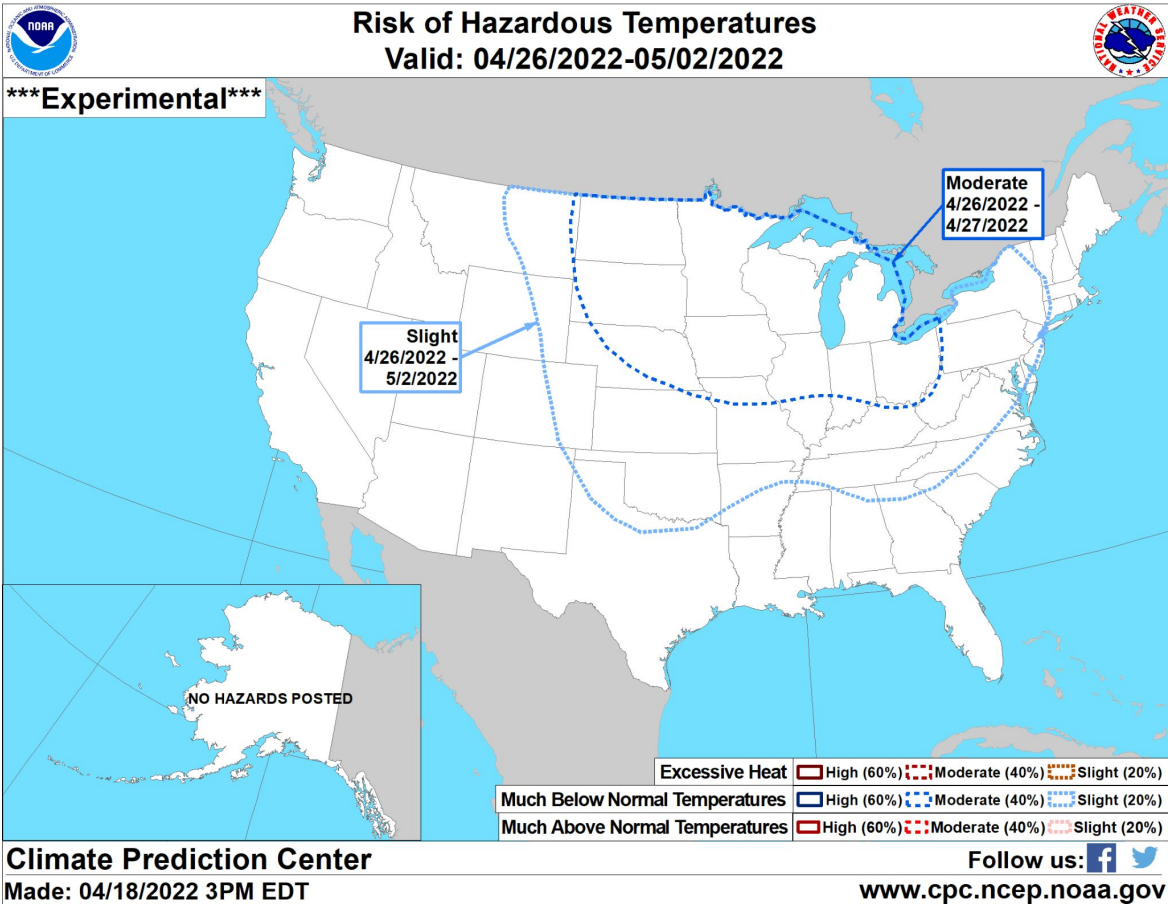
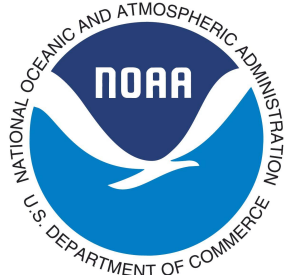
Climate Prediction Center 8 to 14 Day Outlooks - Temperature

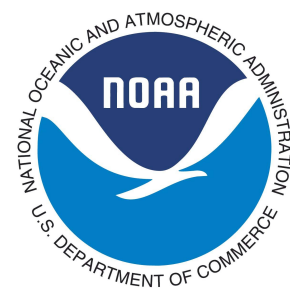


Climate Prediction Center 8 to 14 Day Outlooks - Precipitation



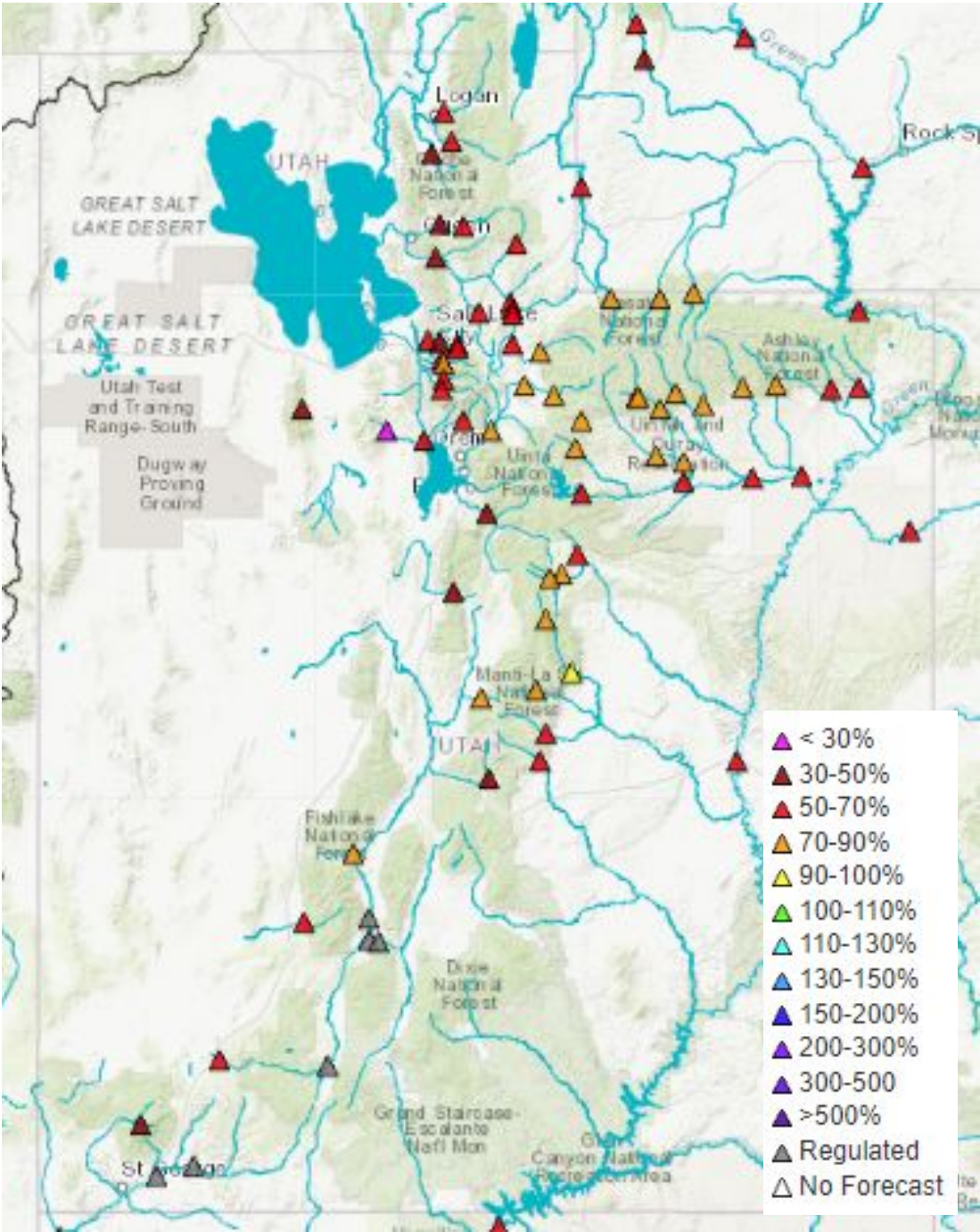
Climate Prediction Center U.S. Week-2 Hazards Outlook





First half of April has been generally cooler and wetter across northern areas, particularly in the Bear and Weber Basins.

Forecasts across Utah range from 35% to 85% of average.



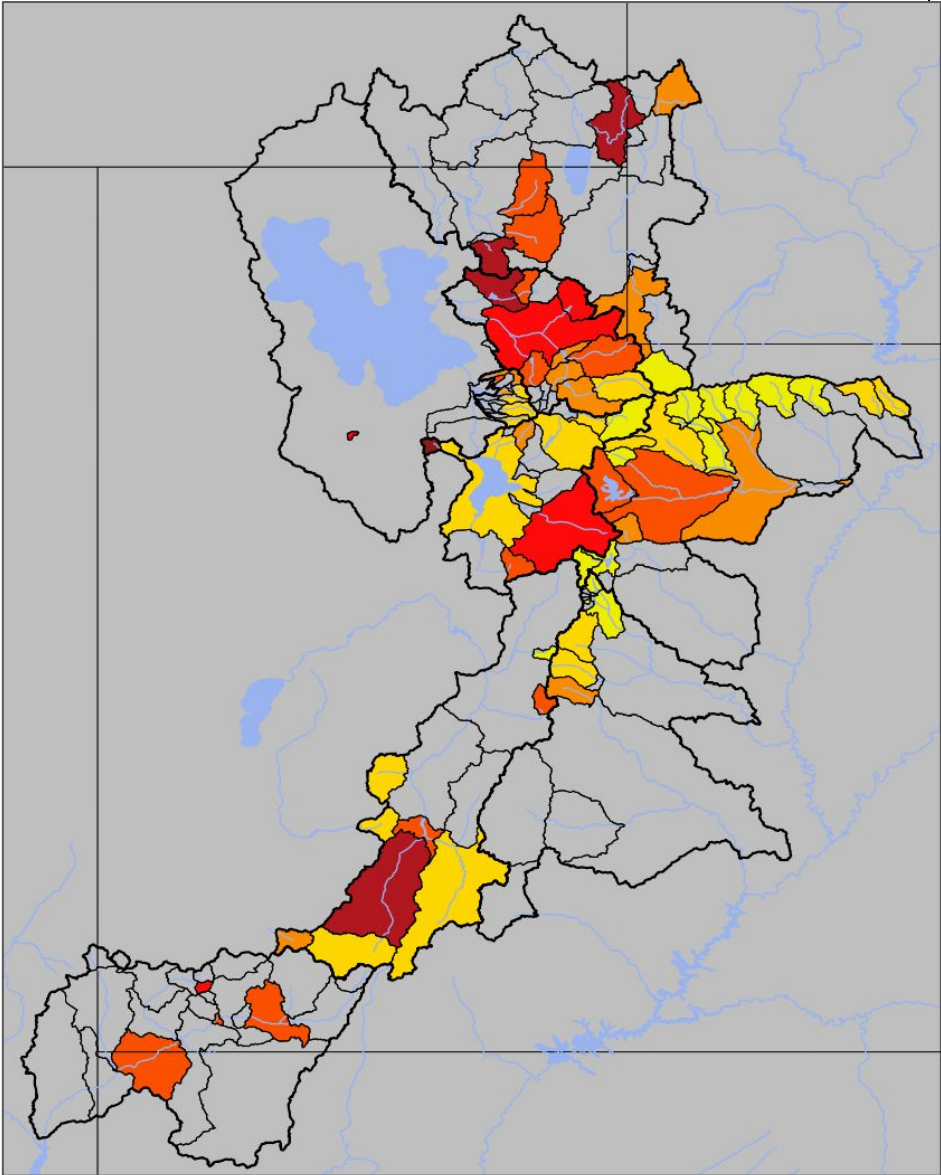
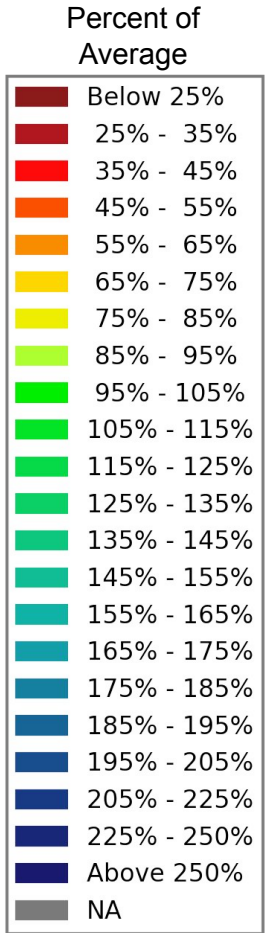
Bear River Basin	40-85%
Weber River Basin	45-75%
Six Creeks River Basin	40-75%
Provo River Basin and Utah Lake	40-80%
Sevier River Basin	35-75%

Utah Water Supply Forecasts - Overview



50% exceedance forecast
(‘normal’ precip/temp scenario)

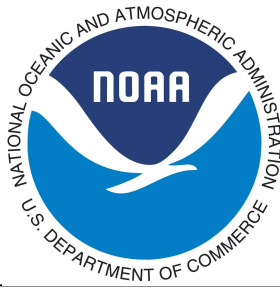
- April 1 Forecast for April-July Volume
- April-July Forecast Streamflow Volumes are in percent of 1991-2020 average
- 10% declines in forecasts from Mar. 1



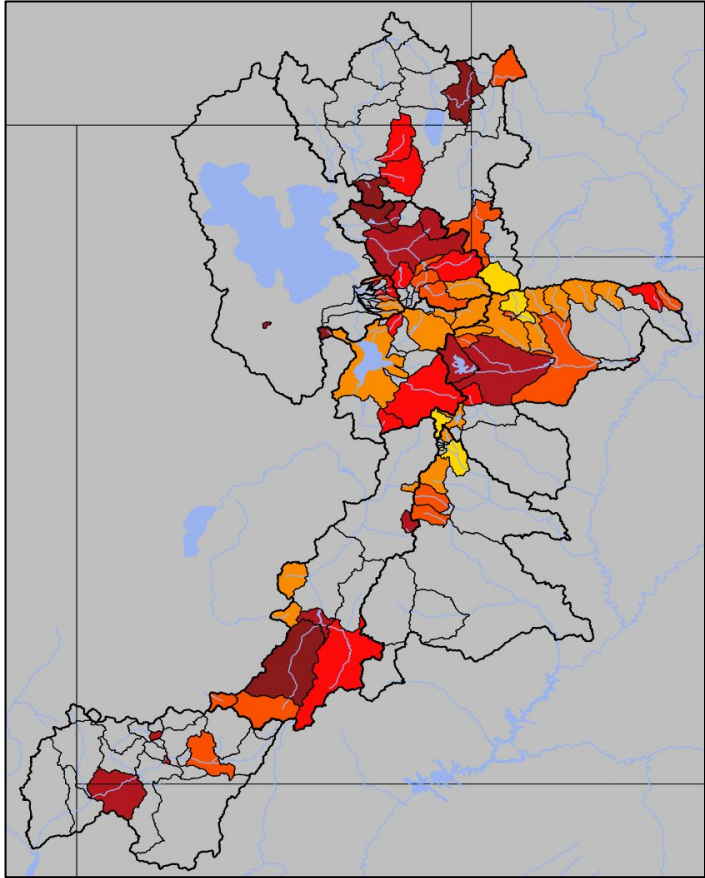
Median value of the...
...individual forecasts (in % of average)
...by Forecast Group.

Weber	55%
Bear	50%
Six Creeks	65%
Provo / Utah Lake	60%
Sevier	65%
Duchesne	75%
Virgin	50%

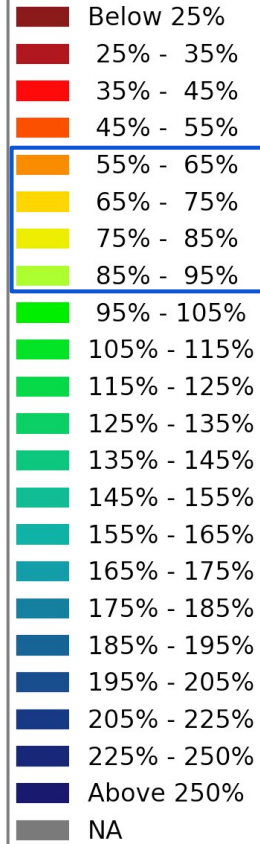
Utah Water Supply Forecasts - Probabilistic Forecast Range



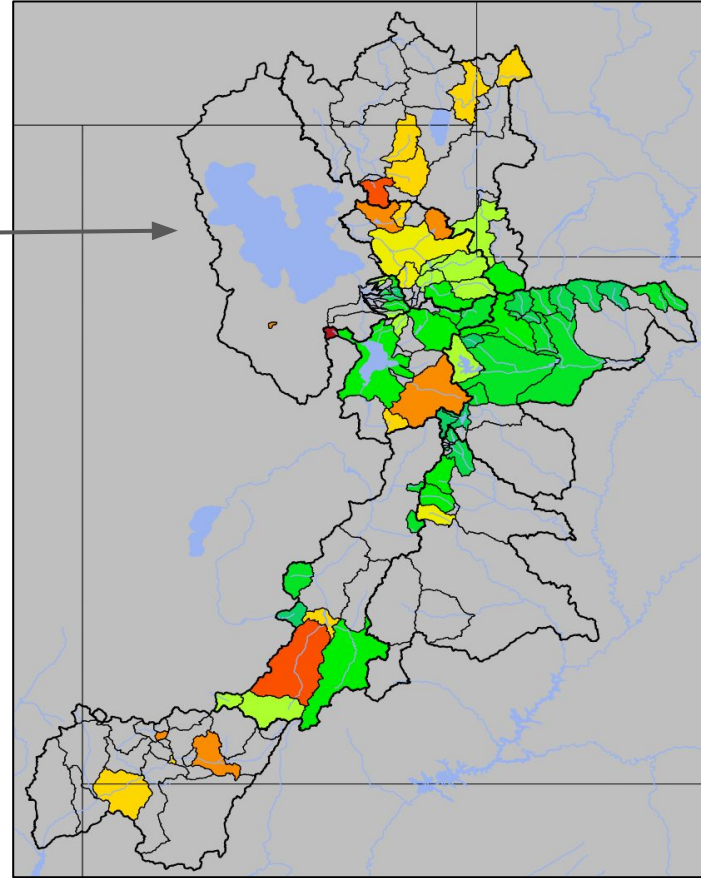
90% exceedance forecast
(drier scenario)



Percent of
Average



10% exceedance forecast
(wetter scenario)



90% exceedance forecast range:

Weber 20% - 60% of Normal

Provo 35% - 65%

Duchesne 30% - 70%

10% exceedance forecast range:

Weber 55% - 100% of Normal

Provo 60% - 105%

Duchesne 100% - 130%

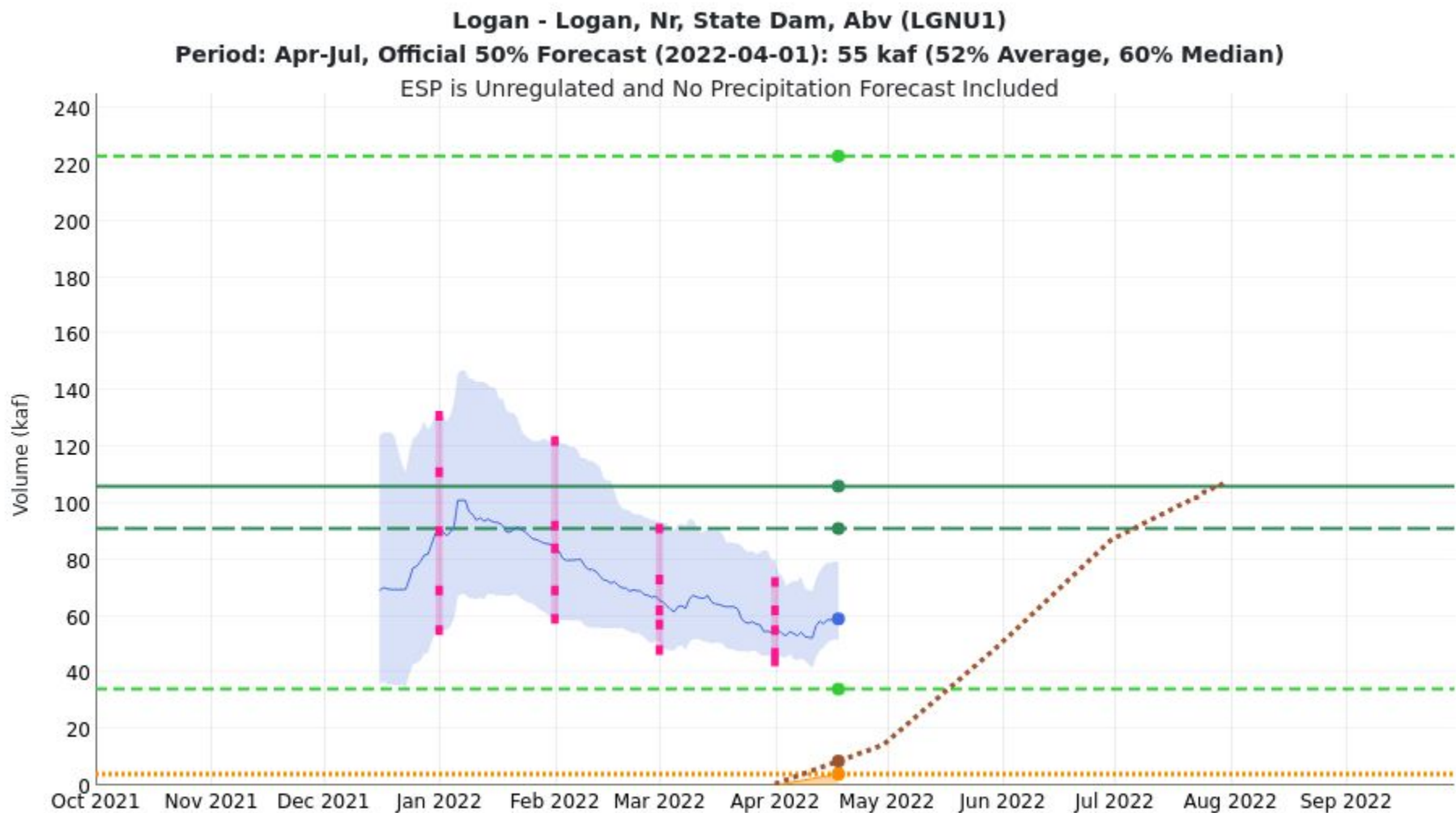
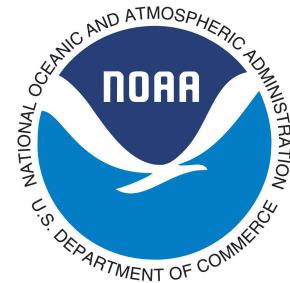
Outside of the Duchesne River Basin few points are forecast to have average runoff even at the 10% exceedance level.

Forecasts are based on:

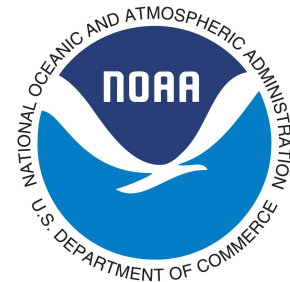
- current conditions
- soil moisture
- snowpack
- streamflow
- future weather (precip/temp)
 - can include 7 day specific forecast
 - 30 years (1981-2020) of historical weather → 30 scenarios

Interpretation:

- 50% exceedance
 - 15/30 scenarios > this value
 - 15/30 scenarios < this value
- 90% exceedance
 - 3/30 scenarios ≤ this value
- 10% exceedance
 - 3/30 scenarios ≥ this value



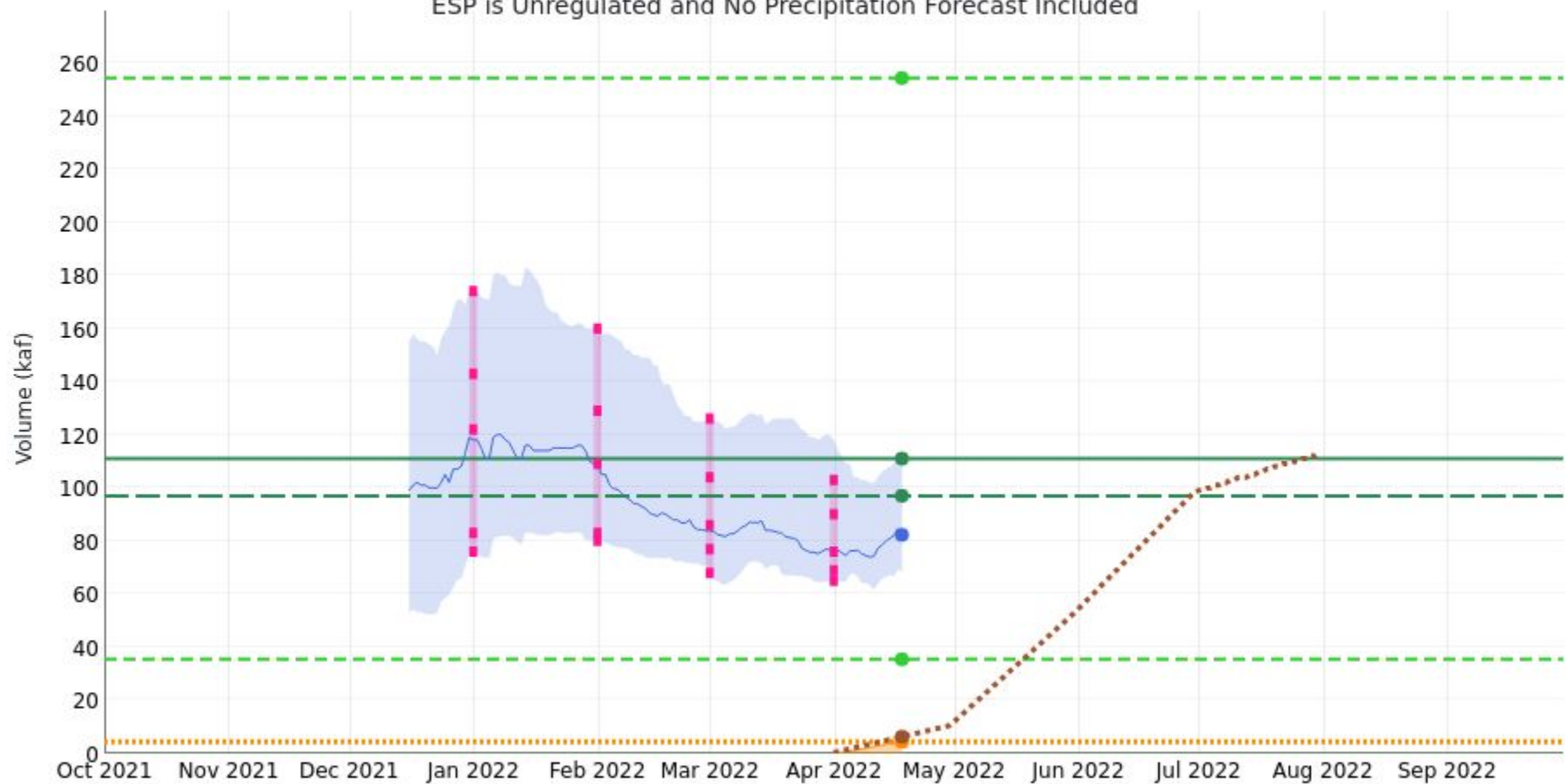
2022/04/18:
Max 1986: 222.92
Min 1977: 34.12
Average: 106
Median: 91
Observed Accumulation: 4.08
Observed Total: 4.08
Normal Accumulation: 8.61
ESP: 59



Weber - Oakley, Nr (OAWU1)

Period: Apr-Jul, Official 50% Forecast (2022-04-01): 76 kaf (68% Average, 78% Median)

ESP is Unregulated and No Precipitation Forecast Included



2022/04/18:

Max 1907: 254.23

Min 1934: 35.47

Average: 111

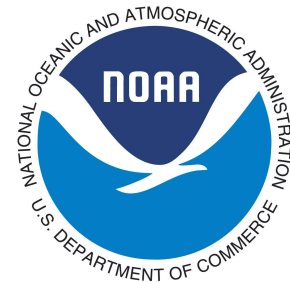
Median: 97

Observed Accumulation: 4.49

Observed Total: 4.49

Normal Accumulation: 6.33

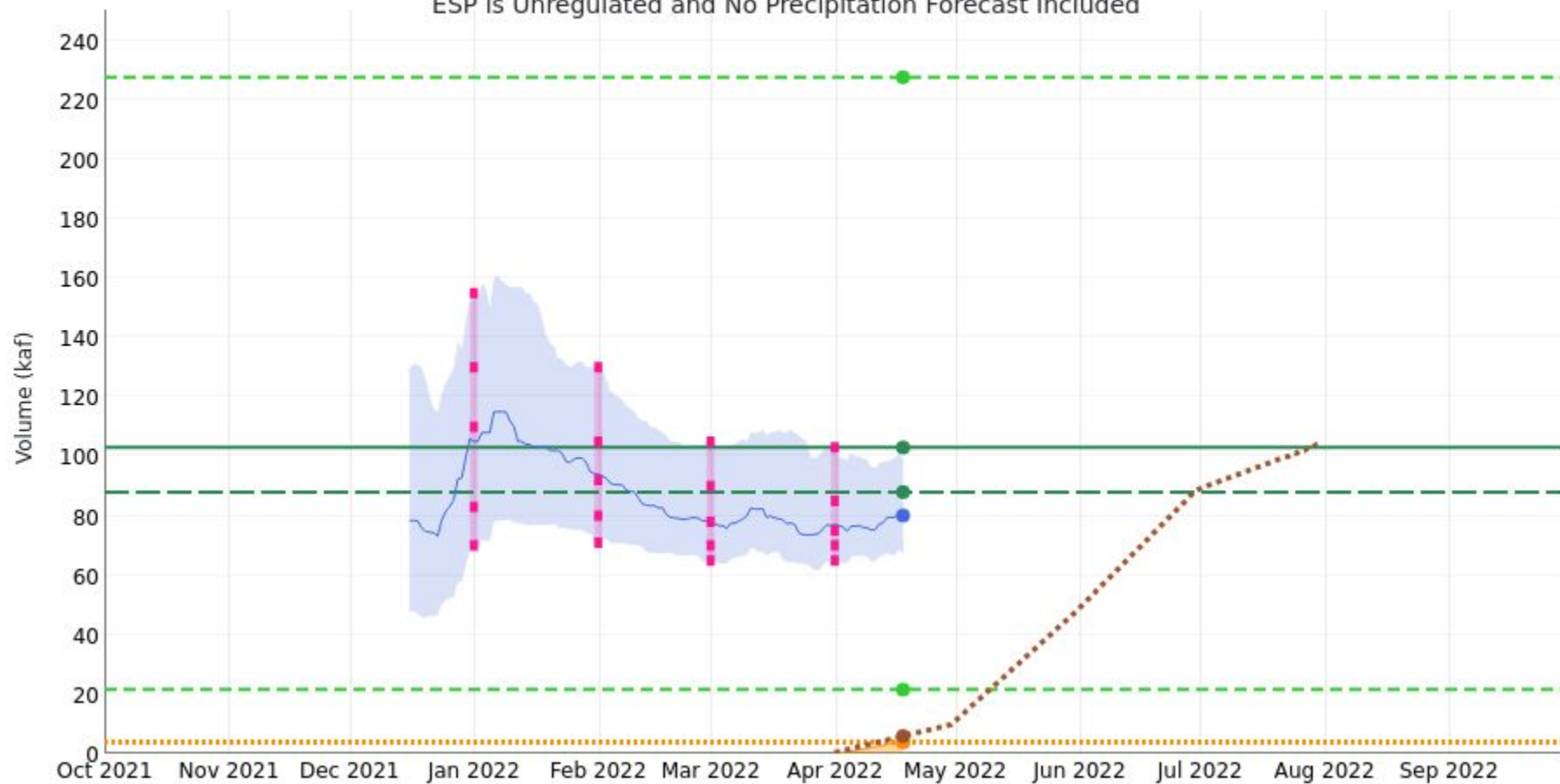
ESP: 82.3



Duchesne - Tabiona, Nr (TADU1)

Period: Apr-Jul, Official 50% Forecast (2022-04-01): 75 kaf (73% Average, 85% Median)

ESP is Unregulated and No Precipitation Forecast Included



2022/04/18:

Max 2011: 227.62

Min 1934: 21.48

Average: 103

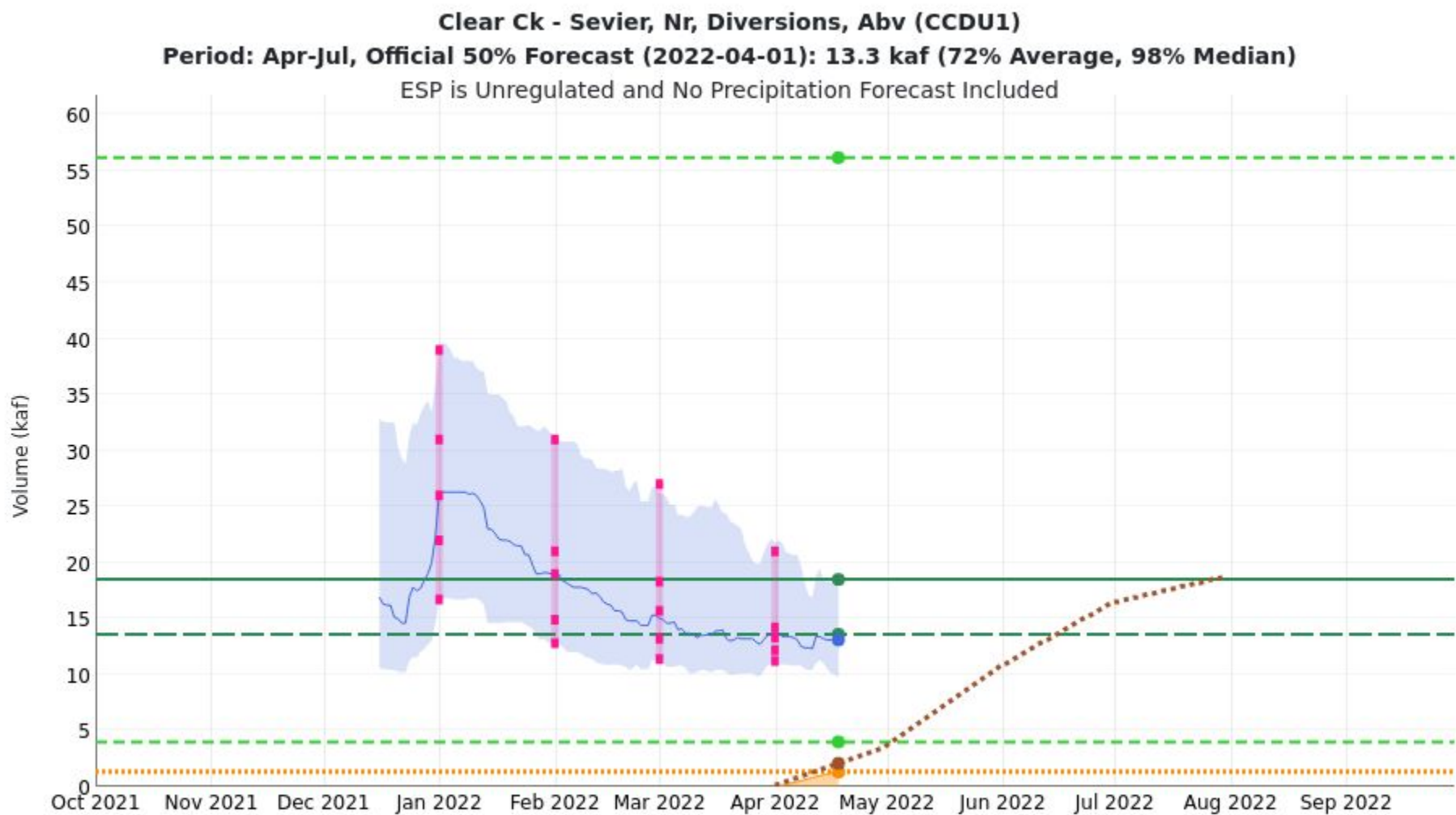
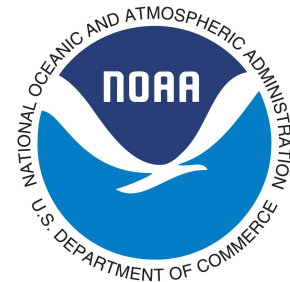
Median: 88

Observed Accumulation: 3.87

Observed Total: 3.87

Normal Accumulation: 5.84

ESP: 80.1



2022/04/18:

Max 1984: 56.16

Min 1959: 3.99

Average: 18.5

Median: 13.6

Observed Accumulation: 1.33

Observed Total: 1.33

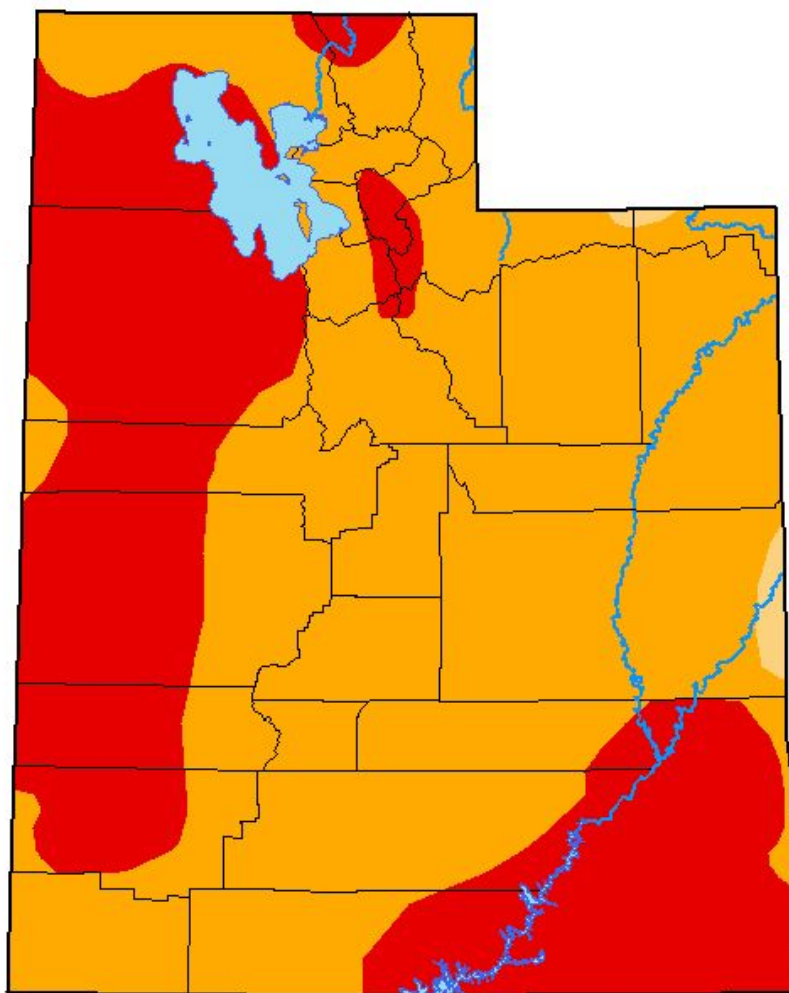
Normal Accumulation: 2.08

ESP: 13.1

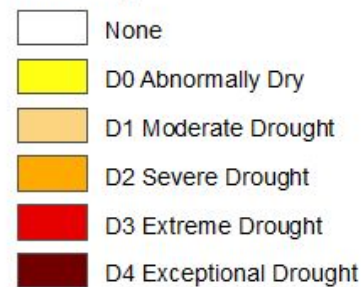
U.S. Drought Monitor

Utah

April 12, 2022
(Released Thursday, Apr. 14, 2022)
Valid 8 a.m. EDT



Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Richard Tinker
CPC/NOAA/NWS/NCEP



droughtmonitor.unl.edu